

ॐ श्री गुरुभ्यो नमः

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

BGS College Of Engineering and Technology



VTU - Model & May 2023 - Exam Question Papers

Chemistry Cycle





[Jai Sri Guredev]
BGSKH Education Trust (R.) – A unit of Sri Adichunchanagiri Shikshana Trust (R.)
BGS College of Engineering and Technology (BGSCET)
Mahalakshmiapuram, West of Chord Road, Bengaluru-560036
(Approved by AICTE, New Delhi and Affiliated to VTU, Belagavi)

Chemistry Cycle 2022-Scheme

Model & Theory Question Papers for 1st Semester

Sl, No	Name of the Subject	
1	Mathematics-1 for CSE Stream	Model Question Paper
2	Chemistry for CSE Stream	Model Question Paper
3	Introduction to Electronics Engineering	Model Question Paper
4	Introduction to Python Programming	Model Question Paper
5	Mathematics-1 for CSE Stream	Theory Question Paper
6	Applied Chemistry for CSE Stream	Theory Question Paper
7	Introduction to Electronics and Communication	Theory Question Paper
8	Introduction to Python Programming	Theory Question Paper
9	Professional Writing Skills in English	Theory Question Paper
10	Indian Constitution	Theory Question Paper
11	Scientific Foundation of Health	Theory Question Paper

Model Question Paper- I with effect from 2022

CBCS SCHEME

First Semester B.E Degree Examination _____

Mathematics-I for Computer Science Engineering Stream (BMATS101)

TIME: 03Hours

Max.Marks:100

- Note: Answer any FIVE full questions, choosing at least ONE question from each MODULE
- VTU Formula Hand Book is Permitted
- M: Marks, L: Bloom's level, C: Course outcomes.

		Module - 1	M	L	C
Q.1	a	With usual notation prove that $\tan \phi = r \frac{d\theta}{dr}$.	6	L2	CO1
	b	Find the angle between the curves $r = a \log \theta$, $r = \frac{\theta}{\log \theta}$	7	L2	CO1
	c	Show that the radius of curvature at any point of the cycloid $x = a(\theta + \sin \theta)$, $y = a(1 - \cos \theta)$ is $4a \cos\left(\frac{\theta}{2}\right)$.	7	L3	CO1
OR					
Q.2	a	Show that the curves $r = a(1 + \sin \theta)$ and $r = a(1 + \cos \theta)$ cut each other orthogonally.	7	L1	CO1
	b	Find the pedal equation of the curve $\frac{2a}{r} = (1 + \cos \theta)$.	8	L2	CO1
	c	Using modern mathematical tool write a program/code to plot the curve $r = 2 \cos 2\theta $.	5	L3	CO5
Module - 2					
Q.3	a	Expand $\log(\sec x)$ by Maclaurin's series up to the term containing x^4 .	6	L2	CO1
	b	If $u = e^{(ax+by)} f(ax - by)$, prove that $b \frac{\partial u}{\partial x} + a \frac{\partial u}{\partial y} = 2abu$ by using concepts composite functions.	7	L2	CO1
	c	Find the extreme values of the function $f(x, y) = x^3 + 3xy^2 - 3y^3 - 3x^2 + 4$	7	L3	CO1
OR					
Q.4	a	Evaluate (i) $\lim_{x \rightarrow 0} \left(\frac{a^x + b^x}{2}\right)^{\frac{1}{x}}$. (ii) $\lim_{x \rightarrow 0} \left(\frac{\tan x}{x}\right)^{\frac{1}{x}}$.	7	L2	CO1

Model Question Paper- 1 with effect from 2022

	b	If $x + y + z = u, y + z = uv, z = uvw$ find $\frac{\partial(x, y, z)}{\partial(u, v, w)}$.	8	L2	CO1
	c	Using modern mathematical tool write a program/code to show that $u_{xx} + u_{yy} = 0$ given $u = e^x(x \cos(y) - y \sin(y))$.	5	L3	CO5

Module - 3

Q.5	a	Solve: $\frac{dy}{dx} + \frac{y}{x} = x^2 y^6$.	6	L2	CO2
	b	Find the orthogonal trajectories of $\frac{x^2}{a^2} + \frac{y^2}{b^2 + \lambda} = 1$, where λ is a parameter.	7	L3	CO2
	c	Solve $xyp^2 - (x^2 + y^2)y + xy = 0$.	7	L2	CO2

OR

Q.6	a	Solve $(x^2 + y^2 + x)dx + xy dy = 0$	6	L2	CO2
	b	When a switch is closed in a circuit containing a battery E, a resistance R and an inductance L, the current i build up at a rate given by $L \frac{di}{dt} + Ri = E$. Find i as a function of t. How long will it be, before the current has reached one-half its final value, if E=6 volts, R=100 Ohms and L=0.1 Henry?	7	L3	CO2
	c	Find the general solution of the equation $(px - y)(py + x) = a^2 p$ by reducing into Clairaut's form by taking the substitution $X = x^2, Y = y^2$.	7	L2	CO2

Module - 4

Q.7	a	Find the least positive values of x such that (i) $71 \equiv x \pmod{8}$ (ii) $78 + x \equiv 3 \pmod{5}$ (iii) $89 \equiv (x + 3) \pmod{4}$	6	L2	CO3
	b	Find the remainder when $(349 \times 74 \times 36)$ is divided by 3.	7	L2	CO3
	c	Solve: $2x + 6y \equiv 1 \pmod{7}$ and $4x + 2y \equiv 2 \pmod{7}$.	7	L3	CO3

OR

Q.8	a	(i) Find the last digit of 7^{2013} (ii) Find the last digit of 13^{37} .	6	L2	CO3
	b	Find the remainder when the number 2^{1000} is divided by 13.	7	L3	CO3
	c	Find the remainder when $14!$ is divided by 17.	7	L2	CO3

Model Question Paper- I with effect from 2022

Module - 5					
Q.9	a	Find the rank of the matrix $\begin{bmatrix} 2 & 3 & -1 & -1 \\ 1 & -1 & -2 & -4 \\ 3 & 1 & 3 & -2 \\ 6 & 3 & 0 & -7 \end{bmatrix}$	6	L2	CO4
	b	Solve the system of equations by Gauss-Jordan method $x + y + z = 10, 2x - y + 3z = 19, x + 2y + 3z = 22.$	7	L3	CO4
	c	For what values λ and μ the system of equations $2x + 3y + 5z = 9, 7x + 3y - 2z = 8, 2x + 3y + \lambda z = \mu,$ has (i) no solution (ii) a unique solution and (iii) infinite number of solutions.	7	L2	CO4
OR					
Q.10	a	Solve the following system of equations by Gauss - Seidel method $10x + y + z = 12, x + 10y + z = 12, x + y + 10z = 12.$	8	L3	CO4
	b	Solve the following system of equations by Gauss-Elimination method $x + y + z = 9, x - 2y + 3z = 8, 2x + y - z = 3.$	7	L3	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.	5	L3	CO5

Visvesvaraya Technological University, Belagavi
Model Question Paper-2 with effect from 2022
Computer Science & Engg. Stream (CBCS Scheme)
First /Second Semester Engineering Degree Examination

USN:

Subject Title: Chemistry for computer science & Engineering stream 22CHES12/22

Max. Marks: 100

TIME: 03 Hours

Note: Answer FIVE full questions, choosing one full question from each module

MODULE 1			Marks
1	a	Explain the working principle of potentiometry sensors, and Thermal sensors (Flame photometer)	7
	b	Write a note on Disposable Sensors? Explain its advantages over classical sensors	7
	c	Describe the construction, working and applications of Sodium-ion batteries and mention any four applications	6
OR			
2	a	Explain the working principle of Electrochemical sensors, and mention its applications	6
	b	What are Actuators & Transducers? Explain about detection of Glyphosate with electrochemical oxidation.	7
	c	What are batteries? Explain the working Principle, Properties and Applications of Quantum Dot sensitized solar cells.	7
MODULE 2			
3	a	Explain the types of organic memory devices by taking p-type and n-type semiconductor materials	7
	b	What are Memory Devices? Explain the Classification of electronic memory devices with examples	6
	c	What are nanomaterials? Explain any four properties of Poly[9-vinylcarbazole] (PVK) suitable for optoelectronic devices.	7
OR			
4	a	Explain the types of organic memory devices by taking p-type and n-type semiconductor materials	6
	b	Mention any four properties and applications of LCD-displays	7
	c	Mention any four properties and applications of OLED	7
MODULE 3			
5	a	Define corrosion? Mention at least six implications of corrosion.	7
	b	Explain: (i) Differential metal corrosion & (ii) Water-line corrosion	6
	c	Explain the construction and working of glass electrode	7
OR			

6	a	Explain the application of conductometric electrode in estimation of weak acid.	6
	b	Explain: i) corrosion control by Anodization & ii) Sacrificial anodic method.	7
	c	What is CPR? A thick brass sheet of area 100 inch ² is exposed to moist air. After 1 years of period, it was found to experience a weight loss 75 g due to corrosion. If the density of brass is 2.52 g/cm ³ . Calculate CPR in mpy and mmpy.	7
MODULE 4			
7	a	A polydisperse sample of polystyrene is prepared by mixing three monodisperse samples in the following proportions. 1g of 10000 molecular weight, 2g of 50000 molecular weight and 2g of 100000 molecular weight. Determine number average and weight average molecular weight. Find the index of polydispersity.	7
	b	Explain the Preparation, properties, and commercial applications of Kevlar.	7
	c	Describe the hydrogen production by photo catalytic water splitting method.	6
OR			
8	a	Describe the hydrogen production by photo catalytic water splitting method.	7
	b	Mention the properties of hydrogen pertaining to fuel and its advantages in production of energy.	7
	c	What are green fuels? Explain the advantages & disadvantages of photovoltaic cells.	6
MODULE 5			
9	a	What are e-waste and explain the need for e-waste management	7
	b	Explain the health hazard due to exposure to e-waste.	7
	c	Write a brief note on role of stakeholders for example; producers, consumers, recyclers, and statutory bodies.	6
OR			
10	a	Which all toxic materials used in manufacturing electrical and electronic products, write there effects on environment.	7
	b	Explain the advantages of recycling and recovery in e-wastes.	6
	c	Explain about sorces, composition and characteristics of e-waste.	7

Visvesvaraya Technological University, Belagavi

Model Question Paper-1 with effect from 2022

Computer Science & Engg. Stream (CBCS Scheme)

First /Second Semester Engineering Degree Examination

USN:

--	--	--	--	--	--	--	--	--	--

Subject Title: Chemistry for Computer Science & Engineering Stream 22CHES12/22

TIME: 03 Hours

Max. Marks: 100

Note: Answer FIVE full questions, choosing one full question from each module

MODULE 1			Marks
1	a	Explain the working principle of Conductometric sensors (conductometry), and Optical sensors (colorimetry)	7
	b	What are Electrochemical Sensors? Explain its application in the measurement of Dissolved Oxygen (DO)	7
	c	Describe the construction, working and applications of Lithium-ion batteries and mention any four applications	6
OR			
2	a	Explain the working principle of Electrochemical sensors, and mention its applications	6
	b	Describe the application of Electrochemical gas sensors in sensing SO _x and NO _x	7
	c	What are Quantum Dot Sensitized Solar Cells (QDSSC's)? Explain the working Principle, Properties and Applications.	7
MODULE 2			
3	a	Explain the types of organic memory devices by taking p-type and n-type semiconductor materials	7
	b	What are photoactive and electroactive materials and explain their working principle in display system	6
	c	What are nanomaterials? Explain any four properties of Polythiophenes (P3HT) suitable for optoelectronic devices.	7
OR			
4	a	What are Memory Devices? Explain the Classification of electronic memory devices with examples	6
	b	Mention any four properties and applications of LC-displays	7
	c	Mention any four properties and applications of QLED	7
MODULE 3			
5	a	Define metallic corrosion? Describe the electrochemical theory of corrosion taking iron as an example.	7
	b	Explain: (i) Differential metal corrosion & (ii) Water-line corrosion	6
	c	Describe galvanizing and mention its applications.	7
OR			
6	a	Explain: i) corrosion control by Anodization & ii) Sacrificial anodic method.	6
	b	Explain the construction and working of Calomel electrode	7
	c	What is CPR? A thick brass sheet of area 400 inch ² is exposed to moist air. After 2 years of period, it was found to experience a weight loss 375 g due to corrosion. If the density of brass is 8.73 g/cm ³ . Calculate CPR in mpy and	7

MODULE 4

7	a	A polydisperse sample of polystyrene is prepared by mixing three monodisperse samples in the following proportions. 1g of 10000 molecular weight, 2g of 50000 molecular weight and 2g of 100000 molecular weight. Determine number average and weight average molecular weight. Find the index of polydispersity.	7
	b	Explain the synthesis of Polyacetylene and mention its applications	7
	c	Explain the generation of hydrogen by Alkaline water electrolysis	6
OR			
8	a	Describe the hydrogen production by photo catalytic water splitting method.	7
	b	Preparation, properties, and commercial applications of Kevlar.	7
	c	Explain the construction and working of photovoltaic cells.	6
MODULE 5			
9	a	Mention the sources of e-waste and explain the need for e-waste management	7
	b	Explain the recycling of e-waste	7
	c	Explain the extraction of gold from e-waste	6
OR			
10	a	Explain the ill effects of toxic materials used in manufacturing electrical and electronic products	7
	b	Explain the pyrometallurgical and direct recycling methods.	6
	c	Write a brief note on role of stakeholders for example; producers, consumers, recyclers, and statutory bodies.	7

Model Question Paper-I/II with effect from 2022-23 (CBCS Scheme)

USN

--	--	--	--	--	--	--	--	--	--

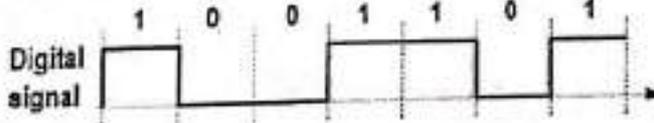
First/Second Semester B.E. Degree Examination Introduction to Electronics Engineering

TIME: 03 Hours

Max. Marks: 100

Note: 01. Answer any FIVE full questions, choosing at least ONE question from each MODULE.

Module -1			*Bloom's Taxonomy Level	Marks
Q.01	a	What is a regulated power supply? With neat block diagram Summarize the working of DC power supply. Also mention the principal components used in each block.	L2	6M
	b	Discuss the need of filter circuit. With circuit diagram and waveforms brief out the operation of smoothing filter for full wave rectifiers.	L2	7M
	c	With neat diagram Summarize working principle of the voltage divider bias CE amplifier with feedback.	L2	7M
OR				
Q.02	a	A 5V zener diode has a maximum rated power dissipation of 500 mW. If the diode is to be used in a simple regulator circuit to supply a regulated 5V to a load having a resistance of 500 Ω , determine a suitable value of series resistor for operation in conjunction with a supply of 9V.	L3	7M
	b	What is voltage multiplier and mention its applications? With circuit diagram brief out the operation of voltage Tripler circuit.	L2	7M
	c	Illustrate how BJT is used as a switch.	L4	6M
Module-2				
Q.03	a	Sketch the circuits of each of the following based on use of Operational Amplifier a) Differentiator. b) Integrator.	L1	6M
	b	Write a note on Ideal characteristics of Op-Amp	L1	7M
	c	Explain the operation of Single stage Astable Oscillator with its circuit diagram.	L2	7M
OR				
Q.04	a	Mention the condition of sustained oscillations. Determine the frequency of oscillations of a three stage ladder network in which C=10nF and R=10K Ω .	L2	6M
	b	With a neat circuit diagram and Waveforms, describe the operation of Crystal controlled Oscillator.	L2	7M
	c	With a neat circuit diagram explain single stage Multivibrators.	L2	7M
Module-3				
Q.05	a	With the help of truth table explain the operation of Full Adder with its circuit diagram and reduce the expression for Sum and carry.	L2	7M
	b	Mention the different theorems and Postulates of Boolean Algebra and Prove each of them with truth table.	L1	7M
	c	Subtract using (r-1)'s compliment method a) $4456_{(10)} - 34234_{(10)}$ Subtract using r's compliment method a) $1010100_{(2)} - 1000100_{(2)}$	L3	6M
OR				
Q.06	a	Convert the following a) $3A6.C58D_{(16)} = ?_{(8)}$ b) $0.6875_{(10)} = ?_{(2)}$	L3	8M

		c) Compute the 9's compliment of $25.639_{(10)}$ d) Compute the 1's compliment of $11101.0110_{(2)}$		
b		State and prove De-morgan's Theorem with its truth table.	L1	5M
c		Minimize the following function a) $F(x,y,z) = xy + x'z + yz$ Find the compliment of the function F1 and F2 $F1(x,y,z) = x'yz' + x'y'z$ $F2(x,y,z) = x(y'z' + yz')$	L3	7M
Module-4				
Q. 07	a	Compare Embedded Systems and General Computing Systems, also provide the applications of Embedded systems.	L2	5M
	b	Write a note on core of an Embedded systems with its block diagram.	L2	8M
	c	Write a note on Transducers? Explain one type of Sensor and Actuator with its operation.	L2	7M
OR				
Q. 08	a	Explain how 7 seg Display can be used to Display the data and write a brief note on operation of LED.	L2	7M
	b	What is an Embedded system and brief about the different elements of an Embedded systems.	L2	8M
	c	Write a note on classification of Embedded systems.	L2	6M
Module-5				
Q. 09	a	Write a note on different types of modulations and briefly describe each in detail.	L2	8M
	b	Brief about Modern Communication System with its block diagram.	L2	7M
	c	List out the advantages of Digital Communication over Analog Communications.	L2	5M
OR				
Q. 10	a	Explain with a neat diagram the concept of Radio wave Propagation and its different types.	L2	7M
	b	Consider the following binary data and sketch the ASK, FSK & PSK modulated waveforms. <div style="text-align: center;">  <p>Digital signal</p> </div> <p style="text-align: center;">Figure 10.b</p>	L2	6M
	c	Describe about Radio signal transmission and Multiple access techniques.	L2	7M

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.

Model Question Paper-sem I/II with effect from 2022-23 (CBCS Scheme)

USN

--	--	--	--	--	--	--	--	--	--

**First/Second Semester B.E. Degree Examination
Introduction to Python Programming**

TIME: 03 Hours

Max. Marks: 100

Note: 01. Answer any FIVE full questions, choosing at least ONE question from each MODULE.

Module -1			Bloom's Taxonomy Level	Marks
Q.01	a	What is an arithmetic expression? . What is the output of this statement? 'hello world' + 100 + 'how are you' explain the reason if the statement produces an error.	CO2-L3	6
	b	Discuss various methods of importing modules in Python programs. Which method is best?. Explain.	CO1 - L1	7
	c	What is the lambda function? Explain with an example of addition of two numbers.	CO2 - L1	7
OR				
Q.02	a	What is a flow control statement?. Discuss if and if else statements with flow chart.	CO1 - L1	7
	b	Write a python program to add n numbers accepted from the user.	CO2 - L3	7
	c	How can you prevent a python program from crashing? discuss different ways to avoid crashing.	CO2 - L2	6
Module-2				
Q.03	a	Discuss list and dictionary data structure with example for each.	CO2 - L1	6
	b	write a python program to accept n numbers and store them in a list. Then print the list without ODD numbers in it.	CO2 - L2	6
	c	For a=['hello', 'how', [1,2,3], [[10,20,30]]] what is the output of following statement (i) print(a[: :]) (ii) print(a[-3][0]) (iii) print(a[2][: -1]) (iv) print(a[0][: : -1])	CO2 - L3	8
OR				
Q.04	a	write a python program to read dictionary data and delete any given key entry in the dictionary.	CO3 - L23	7
	b	Explain different clipboard functions in python used in wiki markup	CO2 - L2	6
	c	Using string slicing operation write python program to reverse each word in a given string (eg: input: "hello how are you", output: "olleh woh era uoy")	CO2 - L3	8
Module-3				
Q.05	a	Discuss different paths of file system.	CO3 - L2	6
	b	Explain how to read specific lines from a file?. illustrate with python program	CO5 - L2	6
	c	What is logging? how this would be used to debug the python program?	CO3 - L3	8
OR				
Q.06	a	What is the use of ZIP? how to create a ZIP folder explain.	CO3 - L2	6

	b	write an algorithm for implement multi clipboard functionality	CO5 - L2	6
	c	Discuss how lists would be written in the file and read from the file?	CO3 - L3	8
Module-4				
Q. 07	a	Define the terms with example: (i) class (ii) objects (iii) instance variables	CO3 - L1	6
	b	create a Time class with hour, min and sec as attributes. Demonstrate how two Time objects would be added.	CO3 - L3	8
	c	Discuss <code>str ()</code> and <code>init ()</code> methods used in class definition.	CO3 - L2	6
OR				
Q. 08	a	What is Encapsulation? Discuss with an example in which access specifiers are used in class definition.	CO3 - L2	4
	b	What is a class diagram? Create empty class and corresponding class diagram for following statements (i) class A derives from class B and Class C (ii) Class D derived from Class A defined in statement (i)	CO3 - L3	8
	c	discuss polymorphism and demonstrate with and python program.	CO3 - L2	8
Module-5				
Q. 09	a	write python program to read cell 2C from sheet 2 of workbook	CO4 - L2	6
	b	explain how pdf pages would created in a pdf document with example.	CO4 - L2	6
	c	What is JSON? discuss with example. Compare it with dictionary	CO4 - L3	8
OR				
Q. 10	a	compare and contrast Excel and CSV files.	CO4 - L2	6
	b	Demonstrate how a Class would be converted into JSON object with an example.	CO4 - L3	8
	c	Explain how a page from different PDFs files would be merged into a new PDF file?	CO4 - L3	6

Model Question Paper-I with effect from 2022-23 (CBCS Scheme)

USN

--	--	--	--	--	--	--	--	--	--

First/Second Semester B.E. Degree Examination

Introduction to Python Programming

TIME: 03 Hours

Max. Marks: 100

Note: 01. Answer any FIVE full questions, choosing at least ONE question from each MODULE.

Module -1		*Bloom's Taxonomy Level	Marks	
Q.01	a	With Python programming examples to each, explain the syntax and control flow diagrams of break and continue statements.	L2	08
	b	Explain TWO ways of importing modules into application in Python with syntax and suitable programming examples.	L2	06
	c	Write a function to calculate factorial of a number. Develop a program to compute binomial coefficient (Given N and R).	L3	06
OR				
Q.02	a	Explain looping control statements in Python with a syntax and example to each.	L2	06
	b	Develop a Python program to generate Fibonacci sequence of length (N). Read N from the console.	L3	04
	c	Write 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. Develop a Python program which reads two values from the console and calls a function DivExp.	L3	06
	d	Explain FOUR scope rules of variables in Python.	L2	04
Module-2				
Q.03	a	Explain with a programming example to each: (ii) get() (iii) setdefault()	L2	06
	b	Develop suitable Python programs with nested lists to explain copy.copy() and copy.deepcopy() methods.	L3	08
	c	Explain append() and index() functions with respect to lists in Python.	L2	06
OR				
Q.04	a	Explain different ways to delete an element from a list with suitable Python syntax and programming examples.	L2	10
	b	Read a multi-digit number (as chars) from the console. Develop a program to print the frequency of each digit with suitable message.	L3	06
	c	Tuples are immutable. Explain with Python programming example.	L2	04
Module-3				
Q.05	a	Explain Python string handling methods with examples: split(),endswith(), ljust(), center(), lstrip()	L2	10
	b	Explain reading and saving python program variables using shelve module with suitable Python program.	L2	06
	c	Develop a Python program to read and print the contents of a text file.	L3	04
OR				
Q.06	a	Explain Python string handling methods with examples: join(), startswith(), rjust(), strip(),rstrip()	L2	10
	b	Explain with suitable Python program segments: (i) os.path.basename() (ii) os.path.join().	L2	05
	c	Develop a Python program find the total size of all the files in the given	L3	05

		directory.		
Module-4				
Q. 07	a	Explain permanent delete and safe delete with a suitable Python programming example to each.	L2	08
	b	Develop a program to backing Up a given Folder (Folder in a current working directory) into a ZIP File by using relevant modules and suitable methods.	L3	06
	c	Explain the role of Assertions in Python with a suitable program.	L2	06
OR				
Q. 08	a	Explain the functions with examples: (i) <code>shutil.copytree()</code> (ii) <code>shutil.move()</code> (iii) <code>shutil.rmtree()</code> .	L3	06
	b	Develop a Python program to traverse the current directory by listing sub-folders and files.	L2	06
	c	Explain the support for Logging with logging module in Python.	L2	08
Module-5				
Q. 09	a	Explain the methods <code>__init__</code> and <code>__str__</code> with suitable code example to each.	L2	06
	b	Explain the program development concept 'prototype and patch' with suitable example.	L2	06
	c	Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N ($N \geq 2$) complex numbers and to compute the addition of N complex numbers.	L3	08
OR				
Q. 10	a	Explain the following with syntax and suitable code snippet: i) Class definition ii) instantiation iii) passing an instance (or objects) as an argument iv) instances as return values.	L2	10
	b	Define pure function and modifier. Explain the role of pure functions and modifiers in application development with suitable python programs.	L2	10

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.

USN

--	--	--	--	--	--	--	--	--	--

First Semester B.E./B.Tech. Degree Examination, Jan./Feb. 2023
Mathematics – I for Computer Science Engineering
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 $\tan \phi = r \frac{d\theta}{dy}$.	6	L2	CO1
	b.	Find the angle of intersection between the curves $y = \frac{a(1-t)}{1+t}$, $y = \frac{a}{1+t}$.	7	L2	CO1
	c.	Find radius of curvature of the curve $y = a \log \sec \left(\frac{x}{a} \right)$ at any point (x, y) .	7	L2	CO1
OR					
Q.2	a.	With usual notations prove that $\frac{1}{p^2} = \frac{1}{r^2} + \frac{1}{r^2} \left(\frac{dr}{d\theta} \right)^2$.	8	L2	CO1
	b.	Find the radius of the curvature of the curve $r = a(1 + \cos \theta)$.	7	L2	CO1
	c.	Using modern mathematical tool write a program/code to plot the Sine and Cosine curve.	5	L3	CO5
Module - 2					
Q.3	a.	Using Maclaurin's series prove that $\sqrt{1 + \sin 2x} = 1 + x - \frac{x^2}{2!} + \frac{x^3}{3!} - \frac{x^4}{4!} + \dots$	6	L2	CO1
	b.	If $Z = e^{ax+by}$ (ax-by), prove that $b \frac{\partial Z}{\partial x} + a \frac{\partial Z}{\partial y} = 2abz$.	7	L2	CO1
	c.	Find the extreme values of the function $f(x, y) = x^2 + y^3 - 3x - 12y + 20$.	7	L3	CO1
OR					
Q.4	a.	Evaluate $\lim_{x \rightarrow 0} \left(\frac{a^x + b^x + c^x + d^x}{4} \right)^x$.	8	L2	CO1
	b.	If $u = \frac{2yz}{x}$, $v = \frac{3xz}{y}$, $w = \frac{4xy}{z}$ find $J \left(\frac{u, v, w}{x, y, z} \right)$.	7	L2	CO1

	c.	Using modern mathematical tool write a program code to evaluate $\lim_{x \rightarrow \infty} \left(1 + \frac{1}{x}\right)^x$	5	L3	CO5
--	----	---	---	----	-----

Module - 3

Q.5	a.	Solve $\frac{dy}{dx} + y \tan x = y^3 \sec x$.	6	L2	CO2
	b.	Find orthogonal trajectories of family of curves $r^n = a^n \cos n\theta$.	7	L3	CO2
	c.	Solve $x^2 p^2 + 3xyp + 2y^2 = 0$.	7	L2	CO2

OR

Q.6	a.	Solve $(x^2 - y^2 + x)dx + xydy = 0$.	6	L2	CO2
	b.	Find the general solution of the equation $(px - y)(py + x) = 2p$ by reducing into Clairaut's form by taking the substitution $X = x^2, Y = y^2$.	7	L2	CO2
	c.	A 12 volts battery is connected to a series circuit in which the inductance is $\frac{1}{2}$ Henry and resistance is 10 ohms. Determine current I , if the initial current is zero.	7	L3	CO2

Module - 4

Q.7	a.	i) Find the last digit in 13^{21} ii) Find the remainder when 7^{118} is divided by 10.	6	L2	CO3
	b.	Find the solutions of the linear congruence $12x \equiv 6 \pmod{21}$.	7	L2	CO3
	c.	Find the general solution of linear Dio-phantine equation $70x + 112y = 168$.	7	L2	CO3

OR

Q.8	a.	Find the remainder when $14!$ is divided by 17.	6	L2	CO3
	b.	Find the solution of system of linear congruences $7x + 3y \equiv 10 \pmod{16}$ $2x + 5y \equiv 9 \pmod{16}$	7	L2	CO3
	c.	Solve $x \equiv 3 \pmod{5}, x \equiv 2 \pmod{6}, x \equiv 4 \pmod{7}$ using Chinese remainder theorem.	7	L3	CO3

Module - 5

Q.9	a.	Find the rank of matrix $A = \begin{bmatrix} 0 & 1 & -3 & -1 \\ 1 & 0 & 1 & 1 \\ 3 & 1 & 0 & 2 \\ 1 & 1 & -2 & 0 \end{bmatrix}$	6	L2	CO4
-----	----	---	---	----	-----

	b.	Solve the system of equations by Gauss-Jordan method. $x + y + z = 9$; $2x + y - z = 0$; $2x + 5y + 7z = 52$.	7	L3	CO4
	c.	Find the largest eigen value and the corresponding eigen vector of the matrix $A = \begin{bmatrix} 2 & -1 & 0 \\ -1 & 2 & -1 \\ 0 & -1 & 2 \end{bmatrix}$ taking $[1 \ 1 \ 1]^T$ as initial eigen vector, using power method.	7	L3	CO4
OR					
Q.10	a.	Find the values of λ and μ for which the system $x + y + z = 6$; $x + 2y + 3z = 10$; $x + 2y + \lambda z = \mu$ has i) Unique solution ii) Infinitely many solutions iii) no solution.	8	L2	CO4
	b.	Solve the following system of equations by Gauss-Elimination method $2x + y + 4z = 12$, $4x + 11y - z = 33$, $8x - 3y + 2z = 20$.	7	L3	CO4
	c.	Using modern mathematical tool, write a program/code to test the consistency of the equations $x + 2y - z = 1$, $2x + y + 4z = 2$, $3x + 3y + 4z = 1$.	5	L3	CO5

CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

BCHES102

First Semester B.E./B.Tech. Degree Examination, Jan./Feb. 2023

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.	What are batteries? Explain the working principle, properties and applications of quantum Dot sensitized solar cells.	7	L2	CO1
	b.	Explain the working principle of electrochemical sensors, and mention its applications.	6	L2	CO1
	c.	What are sensors? Explain the detection of ascorbic Acid and Glyphosate using sensors.	7	L2	CO1
OR					
Q.2	a.	What are electro chemical sensors? Explain its applications in the measurement of dissolved oxygen (DO).	7	L2	CO1
	b.	Describe the construction working and applications of Lithium - ion batteries and mention any four applications.	6	L2	CO1
	c.	Explain about detection of Diclofenac and hydro carbons (PAH's) with electro chemical oxidation sensors.	7	L2	CO1
Module - 2					
Q.3	a.	What are photoactive and electro active materials and explain their working principle in display system.	6	L2	CO1
	b.	Explain any four properties and applications of light emitting materials - poly [9 - Vinyl Carbazole] (PVK) suitable for opto electronic devices.	6	L2	CO1
	c.	Discuss the working and liquid crystal display.	8	L2	CO1
OR					
Q.4	a.	Explain the types of organic memory devices by taking P-type and n-type semi conducting materials.	6	L2	CO1
	b.	What are nano materials? Explain any four properties and applications of polythiophenes (P3HT) suitable for optoelectronic devices.	7	L2	CO1
	c.	What is QLED? Mention any four properties and applications of QLED.	6	L2	CO1
Module - 3					
Q.5	a.	Define metallic corrosion. Describe the electrochemical theory of corrosion taking iron as an example.	6	L2	CO2
	b.	What are Ion-selective electrodes? Explain the determination of pH of a solution using glass electrode.	7	L2	CO2
	c.	Define concentration cell. The EMF of the cell $\text{Ag}/\text{AgNO}_3(\text{C}_1\text{M})//\text{AgNO}_3(0.2\text{M})/\text{Ag}$ is 0.8V at 25°C. Find the value of C_1 .	7	L3	CO2

OR

Q.6	a.	Briefly explain the principle, instrumentation and working of potentiometry taking estimation of Iron as example.	6	L2	CO1
	b.	What are reference electrode? Explain the construction, working and application of Calomel electrode.	7	L2	CO1
	c.	What is CPR? A piece of corroded steel plate was found in a submerged ocean vessel. It was estimated that the original area of the plate was 10 inch ² and that approx 2.6kg had corroded away during the submersion. Assuming a corrosion penetration rate of 200 mpy for this alloy in sea water, estimate the time of submersion in years. The density of steel is 7.9g/cm ³ .	7	L3	CO2

Module - 4

Q.7	a.	In sample of a polymer, 20% molecules have molecular mass 15000 g/mol, 45% molecules have molecular mass 25000 g/mol, and remaining molecules have molecular mass 27000g/mol, calculate the number average and weight average molecular mass of the polymer.	6	L3	CO3
	b.	Explain the preparation, properties and commercial application of Kevlar.	7	L2	CO3
	c.	What are green fuels? Explain the generation of hydrogen by Alkaline water electrolysis with its advantages.	7	L2	CO3

OR

Q.8	a.	Explain the construction and working of photovoltaic cells. Mention the advantages and disadvantages.	6	L2	CO4
	b.	Explain the preparation, properties, and commercial applications of graphene oxide.	7	L2	CO4
	c.	What are conducting polymer? Discuss the conduction mechanism in polyacetylene through oxidative doping technique and its uses.	7	L2	CO4

Module - 5

Q.9	a.	Explain the ill effects of toxic materials used in manufacturing electrical and electronic products.	7	L2	CO5
	b.	Write a brief note on role of stake-holders for example, producers, consumers, recyclers and statutory bodies.	6	L2	CO5
	c.	Briefly discuss the various chemical methods involved in hydrometallurgy process of recovery of E-waste.	7	L2	CO5

OR

Q.10	a.	Explain the pyro metallurgical recycling methods.	7	L2	CO5
	b.	Explain the steps involved in extraction of gold from e-waste.	7	L2	CO5
	c.	Mention the sources of e-waste and explain the need for e-waste management.	6	L2	CO5

CBCS SCHEME

USN

LMP22CG039

BESCK104C/ BESCKC104

First Semester B.E./B.Tech. Degree Examination, Jan./Feb. 2023 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. VTU Formula Hand Book is permitted.
3. M : Marks, L: Bloom's level, C: Course outcomes.*

Module - 1			M	L	C
Q.1	a.	Draw the block diagram of DC power supply and explain the individual blocks.	8	L2	CO1
	b.	Draw the circuit diagram of voltage regulation and explain the operation.	6	L2	CO1
	c.	An amplifier produces an output voltage of 2V for an input of 50mV. If the input and output currents in this condition are 4mA and 200mA respectively. Find: i) The voltage gain ii) The current gain iii) The power gain.	6	L3	CO1
OR					
Q.2	a.	With a neat circuit diagram and waveform. Explain the working operation of a full wave bridge rectifier.	8	L2	CO1
	b.	Draw the circuit diagram of voltage doubler and the working operation.	6	L2	CO1
	c.	Discuss briefly a Negative feedback amplifier with block diagram.	6	L1	CO1
Module - 2					
Q.3	a.	With circuit diagram, explain the operation of an wien bridge oscillator.	8	L2	CO2
	b.	Define the following operational amplifier parameters value. i) Open loop voltage gain ii) Output Resistance iii) Slew Rate.	6	L1	CO2
	c.	Draw the circuit diagram and input and output waveform of the following operational amplifier circuits i) Differentiators ii) Integrator.	6	L1	CO2
OR					
Q.4	a.	Explain the single state astable oscillator with circuit diagram.	8	L1	CO2
	b.	What is oscillator? And mention condition for oscillations.	6	L1	CO2
	c.	Explain the operation of summing amplifier using operational amplifier and write the output equation.	6	L2	CO2

Module - 3

Q.5	a.	Implement full adder using two half adders and one OR gate. Write the equations for Sum and C_{out} .	8	L3	CO3
	b.	Convert the following numbers to its equivalent numbers and show the steps. i) $(10110001101011.111100000)_2 = (?)_8$ ii) $(10110001101011.11110010)_2 = (?)_{16}$ iii) $(1010.011)_2 = (?)_{10}$	6	L2	CO3
	c.	Using basic Boolean theorems prove i) $(x + y)(x + z) = x + yz$ ii) $xy + \bar{x}z + yz = xz + yz$	6	L3	CO3

OR

Q.6	a.	Express the Boolean function i) $F = A + \bar{B}C$ in a sum of minterms form ii) $F = xy + \bar{x}z$ in a product of maxterms form.	8	L2	CO3
	b.	Subtract the following using 10's complement i) $(72532 - 3250)_{10}$ ii) $(3250 - 72532)_{10}$	6	L2	CO3
	c.	Write the step by step procedure to design a combinational circuit.	6	L1	CO3

Module - 4

Q.7	a.	What is an Embedded system? Compare Embedded systems with general computer systems.	8	L2	CO4
	b.	Mention the classification of Embedded system based on complexity and performance.	6	L1	CO4
	c.	Write a short note on - 7-segment LED display.	6	L2	CO4

OR

Q.8	a.	Discuss the typical embedded system elements.	8	L2	CO4
	b.	What is the difference between RISC and CISC processors?	6	L1	CO4
	c.	Write a short note on : i) Transducers ii) Sensors.	6	L2	CO4

Module - 5

Q.9	a.	Draw the block diagram of basic communication system and briefly explain the individual blocks.	10	L2	CO5
	b.	Discuss the types of communication systems.	5	L2	CO5
	c.	List the advantages of digital communication over analog communication.	5	L1	CO5

OR

Q.10	a.	Define Amplitude and Frequency modulation. Sketch AM and FM waveform.	10	L1	CO5
	b.	Write a short note on : Amplitude Shift Keying (ASK) modulator and demodulator.	10	L2	CO5

USN

BPLCK105B/BPLCKB105

First Semester B.E./B.Tech. Degree Examination, Jan./Feb. 2023

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. What is the need for role of precedence? Illustrate the rules of precedence in Python with example.	6	L2	CO1
	b. Explain the local and global scope with suitable examples.	6	L2	CO1
	c. Develop a program to generate Fibonacci sequence of length (N). Read N from the console.	8	L3	CO1
OR				
Q.2	a. What are functions? Explain Python function with parameters and return statements.	7	L2	CO1
	b. Define exception handling. How exceptions are handled in python? Write a program to solve divide by zero exception.	7	L2	CO1
	c. Develop a python program to calculate the area of rectangle and triangle print the result.	6	L3	CO1
Module - 2				
Q.3	a. Explain negative indexing, slicing, index(), append(), remove(), pop(), insert() and sort() with suitable example.	8	L2	CO2
	b. Explain the use of in and not in operators in list with suitable examples.	6	L2	CO2
	c. Develop a program to find mean, variance and standard deviation.	6	L3	CO2
OR				
Q.4	a. Explain the following methods in lists with an examples: i) len() ii) sum() iii) max() iv) min().	8	L2	CO2
	b. Explain set() and setdefault() method in a dictionary.	6	L2	CO2
	c. Develop a Python program to swap cases of a given string input: Java output: jAVA	6	L3	CO2
Module - 3				
Q.5	a. Explain join() and split() method with examples.	8	L2	CO3
	b. Explain with examples: i) isalpha() ii) isalnum() iii) isspace().	6	L2	CO3
	c. Develop a python code to determine whether the given string is a palindrome or not a palindrome.	6	L3	CO3

OR					
Q.6	a.	Explain the concept of file handling. Also explain reading and writing process with suitable example.	8	L2	CO3
	b.	Explain the concept of file path. Also discuss absolute and relative file path.	6	L2	CO3
	c.	Briefly explain saving variables with shelf module.	6	L3	CO3
Module - 4					
Q.7	a.	Explain the following file operations in Python with suitable example: 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? Also explain reading of a zip file with an example.	8	L2	CO3
	c.	List out the differences between <code>shutil.copy()</code> and <code>shutil.copytree()</code> method.	6	L3	CO3
OR					
Q.8	a.	Briefly explain assertions and raising a exception.	6	L2	CO3
	b.	List out the benefits of using logging module with an example.	6	L2	CO3
	c.	Develop a program with a function named <code>DivExp</code> which takes two parameters <code>a</code> , <code>b</code> and returns a value <code>C</code> ($C = a/b$). Write suitable assertion for $a > 0$ in function <code>DivExp</code> and raise an exception for which $b = 0$. Develop a suitable program which reads two values from the console and calls a function <code>DivExp</code> .	8	L3	CO3
Module - 5					
Q.9	a.	Define a class and object, construct the class called rectangle and initialize it with height = 100, width = 200, starting point as ($x = 0, y = 0$). Write a program to display the center point co-ordinates of a rectangle.	8	L2	CO4
	b.	Explain the concept of copying using copy module with an example.	6	L2	CO4
	c.	Explain the concept of inheritance with an example.	6	L2	CO4
OR					
Q.10	a.	Define a function which takes two objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read $N(N \geq 2)$ complex numbers and to compute the addition of N complex numbers.	8	L2	CO4
	b.	Explain <code>__init__()</code> and <code>__str__()</code> method with examples.	6	L2	CO4
	c.	Briefly explain the printing of objects with an examples.	6	L2	CO4

USN

--	--	--	--	--	--	--	--	--	--

Question Paper Version : D

First Semester B.E. Degree Examination, Jan./Feb. 2023
Professional Writing Skills in 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.

Choose the appropriate answer from the given option (Q.No.1 to Q.No.5)

1. Which punctuation is used to join the two independent clauses?
a) Comma b) Semicolon c) Inverted Comma d) Period
2. What is Ellipsis?
a) Three dots in a printed text that show one or two words left intentionally
b) Three dots used to complete sentence
c) A complete sentence
d) It has no meaning
3. Which of these is not a punctuation mark?
a) Full stop b) Comma
c) Colon d) Hashtag
4. Choose the correct statement:
a) I met a beautiful , European woman.
b) I met a beautiful European woman.
c) I met a beautiful European, woman.
d) I met a beautiful , European, woman.

Version - D - 1 of 6

5. Choose the correct statement:
 a) My aunt who lives in Mumbai is a doctor.
 b) My aunt, who lives in Mumbai, is a doctor.
 c) My aunt, who lives in Mumbai is a doctor.
 d) My aunt who lives in Mumbai, is a doctor.

Choose the correct word to fill the gaps in the following (Q.No.6 to Q.No.10)

6. In a group discussion, we should be _____
 a) Assertive
 b) Dominating
 c) Subjective
 d) Ignorant
7. In a group discussion, one must communicate with _____
 a) Hostility
 b) Ignorance
 c) Knowledge
 d) Long sentences
8. Which of these must be avoided in a group discussion?
 a) Speaking facts
 b) Asking questions
 c) Speaking fast
 d) Speaking with clarity
9. Which of these qualities are important in a group discussion?
 a) Emotional stability
 b) Hostility
 c) Ignorance
 d) Aggressiveness
10. If the speaker uses the word, "but", he is making a point of _____
 a) Background
 b) Theme
 c) Setting
 d) Conflict

Choose the appropriate answer from the given option (Q.No.11 to Q. No.15)

11. According to subject-verb agreement, we use _____ verb with two or more subjects are connected by 'and'.
 a) Singular Verb
 b) Plural Verb
 c) Adverb
 d) No Verb
12. Any artist would like _____ creation to last for hundred years.
 a) Their
 b) That
 c) his/her
 d) Those
13. The girls finished _____ job.
 a) Hers
 b) Her
 c) Their
 d) Its
14. The committee _____ hesitant about the change.
 a) Is
 b) Are
 c) Have
 d) Has

15. When the subject of a sentence is plural, the pronoun in the sentence becomes _____
 a) Singular Verb b) Plural noun c) Singular d) Plural

Identify the part of speech of the underlined words (Q.No.16 – Q.No.20)

16. They did not comply with his request.
 a) Verb b) Noun c) Preposition d) Adjective
17. She carried a large umbrella.
 a) Verb b) Noun c) Preposition d) Adjective
18. Do you know how to play billiards?
 a) Verb b) Noun c) Preposition d) Adjective
19. I must not forget to take my medicine.
 a) Verb b) Noun c) Preposition d) Adjective
20. I bought six mangoes.
 a) Verb b) Noun c) Preposition d) Adjective

Choose the correct word to fill the gaps in the following (Q.No.21 to Q.No.30)

21. Which one is not one of the ways to give feedback when listening?
 a) repeating the information
 b) give advice
 c) reflect how the speaker probably feels
 d) put your statement in your own words to clarify
22. Which one is not part of active listening?
 a) Look at the person b) Encourage the person to talk
 c) Give advice d) Use empathy
23. Why is it called "active listening"?
 a) You stay active rather than sitting around
 b) It requires a lot of multi-tasking
 c) You use your eyes and brain as well as your ears
 d) You look very focused
24. William is talking to Joana, but Joana is not actively listening. William probably feels
 a) Relaxed b) Frustrated c) Cheerful d) Ashamed

USN

--	--	--	--	--	--	--	--	--	--

Question Paper Version : B

First Semester B.E. Degree Examination, Jan./Feb. 2023

Professional Writing Skills in 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.**

Choose the correct word to fill the gaps in the following (Q.No.1 to Q.No.5)

1. A co-worker comes to your office to introduce you to a friend of his. You:
 - a) Smile and nod.
 - b) You stand up, establish eye contact, smile and shake his hand.
 - c) Wave and tell him how happy you are to meet him.
 - d) Give him a "high five".

2. A four to five minutes presentation should have minimum
 - a) 100 words
 - b) 400 to 500 words
 - c) 200 words
 - d) 1000 words

3. In presentation hall, as a listener you
 - a) Empathize with talkers
 - b) Should shout
 - c) Pass comments
 - d) Distract

4. In a formal presentation, slides should be written in what colour
 - a) Orange
 - b) Red
 - c) Blue
 - d) Any colour is fine

5. What are the signals for understanding the content
 - a) WH questions
 - b) Check prepositions
 - c) Underline all the nouns
 - d) All

- Choose the correct word to fill the gaps in the following (Q.No.6 to Q.No.15)
6. Which one is not one of the ways to give feedback when listening?
 - a) repeating the information
 - b) give advice
 - c) reflect how the speaker probably feels
 - d) put your statement in your own words to clarify
 7. Which one is not part of active listening?
 - a) Look at the person
 - b) Encourage the person to talk
 - c) Give advice
 - d) Use empathy
 8. Why is it called "active listening"?
 - a) You stay active rather than sitting around
 - b) It requires a lot of multi-tasking
 - c) You use your eyes and brain as well as your ears
 - d) You look very focused
 9. William is talking to Joana, but Joana is not actively listening. William probably feels
 - a) Relaxed
 - b) Frustrated
 - c) Cheerful
 - d) Ashamed
 10. A reflective listener _____
 - a) Appreciated the message
 - b) repeats the message's essential parts
 - c) thinks about the speaker's message
 - d) ignores the details
 11. Which of the following behaviours are part of active listening
 - a) Maintain eye contact
 - b) Nodding and making eye contact
 - c) Asking for clarification
 - d) All of these
 12. Which of the following is a sign of active listening?
 - a) paraphrasing, or summarizing what someone has said
 - b) interrupting, or talking over someone
 - c) Changing the subject
 - d) being totally silent while someone else talks
 13. Zoe is giving a presentation on the Midwest region of the US. If you actively listening you might _____
 - a) Speak over her to describe your trip to Netherlands.
 - b) Raise your hand in the middle of the presentation to invite Zoe to the mall after school.
 - c) Stay quiet while daydreaming about your trip to Lonavala in May.
 - d) Raise your hand at the end to ask her to clarify if Kansa is part of that region.

14. Listening and hearing refer to:
 a) Mental and physical acts, respectively b) A specific act versus a general act
 c) Different things d) The same things
15. Which of the following kinds of communication do students spend most time engaged in?
 a) Listening b) Speaking c) Reading d) Writing

Choose the correct word to fill the gaps in the following (Q.No.16 to Q.No.20)

16. In a group discussion, we should be _____
 a) Assertive b) Dominating c) Subjective d) Ignorant
17. In a group discussion, one must communicate with _____
 a) Hostility b) Ignorance c) Knowledge d) Long sentences
18. Which of these must be avoided in a group discussion?
 a) Speaking facts b) Asking questions
 c) Speaking fast d) Speaking with clarity
19. Which of these qualities are important in a group discussion?
 a) Emotional stability b) Hostility
 c) Ignorance d) Aggressiveness
20. If the speaker uses the word, "but", he is making a point of _____
 a) Background b) Theme c) Setting d) Conflict

In each of the following questions, find out which part of the sentence has an error. If there is no mistake, the answer is 'No error'. (Q.No.21 to Q.No.25).

21. He obtained good marks (a) / not only in English essay (b) / but also in arithmetic which was (c) / full of complicated calculations. (d)
22. A person I met (a) / in the theatre (b) / was the play wright himself. (c) / No error (d)
23. Sunitha opened a almira (a) / full of books (b) / and took one of them (c) / for reading. (d)
24. On my request (a) / Lalit introduced me (b) / to his friend (c) / who is singer and a scientist (d)
25. The famous Dr. Chandra (a) / is only dentist (b) / in our village. (c) / No error (d)

Choose the appropriate answer from the given option (Q.No.26 to Q.No.30)

26. Which punctuation is used to join the two independent clauses?
 a) Comma b) Semicolon c) Inverted Comma d) Period
27. What is Ellipsis?
 a) Three dots in a printed text that show one or two words left intentionally
 b) Three dots used to complete sentence
 c) A complete sentence
 d) It has no meaning
28. Which of these is not a punctuation mark?
 a) Full stop b) Comma c) Colon d) Hashtag
29. Choose the correct statement:
 a) I met a beautiful , European woman.
 b) I met a beautiful European woman.
 c) I met a beautiful European, woman.
 d) I met a beautiful , European, woman.
30. Choose the correct statement:
 a) My aunt who lives in Mumbai is a doctor.
 b) My aunt, who lives in Mumbai, is a doctor.
 c) My aunt, who lives in Mumbai is a doctor.
 d) My aunt who lives in Mumbai, is a doctor.

Choose the appropriate answer from the given option (Q.No.31 to Q.No.35)

31. "Merge together" is an example of _____
 a) Misplaced modifier b) Redundancies
 c) Dangling modifier d) Preposition
32. 'He nearly lost his way to the hotel.' Is an example of _____
 a) Misplaced modifier b) Redundancies
 c) Dangling modifier d) Preposition
33. Which of the following sentence has a dangling modifier?
 a) To raise a good dog, patience is useful.
 b) Moving slowly, Bowie stalked the rabbits.
 c) After eating the cat food, Bowie belched.
 d) Having read the book, I think the film will be a hit.

34. Which of the following sentence has a misplaced modifier?
 a) A dog appeared in my dream that sang like an angel.
 b) The steak on the grill is hers.
 c) We slowly ate lunch that we had brought
 d) The teacher said she would return our essays on Monday.
35. We use _____ to refer to any expression in which a modifier's meaning is contained in the word it modifies.
 a) Dangling modifiers
 b) Proper noun
 c) Redundancies
 d) Metonym

Choose the appropriate answer from the given option (Q.No.36 to Q.No.40)

36. Where _____?
 a) your sister works
 b) your sister work
 c) do you sister work
 d) does your sister work
37. When _____?
 a) did you arrived
 b) did you arrive
 c) were you arrived
 d) arrived
38. The hen _____.
 a) has lain six eggs
 b) has laid six eggs
 c) have laid six eggs
 d) has lay eggs
39. We _____ tennis every day.
 a) are playing
 b) Play
 c) Played
 d) have been playing
40. He _____ sleeping for two hours.
 a) has been
 b) has been
 c) is sleeping
 d) have been

Choose the appropriate answer from the given option (Q.No.41 to Q. No. 45)

41. According to subject-verb agreement, we use _____ verb with two or more subjects are connected by 'and'.
 a) Singular Verb
 b) Plural Verb
 c) Adverb
 d) No Verb
42. Any artist would like _____ creation to last for hundred years.
 a) Their
 b) That
 c) his/her
 d) Those

43. The girls finished _____ job.
a) Hers b) Her c) Their d) Its
44. The committee _____ hesitant about the change.
a) Is b) Are c) Have d) Has
45. When the subject of a sentence is plural, the pronoun in the sentence becomes _____.
a) Singular Verb b) Plural noun c) Singular d) Plural

Identify the part of speech of the underlined words (Q.No.46 – Q.No.50)

46. They did not comply with his request.
a) Verb b) Noun c) Preposition d) Adjective
47. She carried a large umbrella.
a) Verb b) Noun c) Preposition d) Adjective
48. Do you know how to play billiards?
a) Verb b) Noun c) Preposition d) Adjective
49. I must not forget to take my medicine.
a) Verb b) Noun c) Preposition d) Adjective
50. I bought six mangoes.
a) Verb b) Noun c) Preposition d) Adjective

USN

--	--	--	--	--	--	--	--	--	--

Question Paper Version : C

First Semester B.E. Degree Examination, Jan./Feb. 2023
Professional Writing Skills in 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.

Choose the appropriate answer from the given option (Q.No.1 to Q. No.5)

1. According to subject-verb agreement, we use _____ verb with two or more subjects are connected by 'and'.
 a) Singular Verb b) Plural Verb c) Adverb d) No Verb
2. Any artist would like _____ creation to last for hundred years.
 a) Their b) That c) his/her d) Those
3. The girls finished _____ job.
 a) Hers b) Her c) Their d) Its
4. The committee _____ hesitant about the change.
 a) Is b) Are c) Have d) Has
5. When the subject of a sentence is plural, the pronoun in the sentence becomes _____.
 a) Singular Verb b) Plural noun c) Singular d) Plural

Choose the appropriate answer from the given option (Q.No.6 to Q.No.10)

6. Which punctuation is used to join the two independent clauses?
 a) Comma
 b) Semicolon
 c) Inverted Comma
 d) Period
7. What is Ellipsis?
 a) Three dots in a printed text that show one or two words left intentionally
 b) Three dots used to complete sentence
 c) A complete sentence
 d) It has no meaning
8. Which of these is not a punctuation mark?
 a) Full stop
 b) Comma
 c) Colon
 d) Hashtag
9. Choose the correct statement:
 a) I met a beautiful , European woman.
 b) I met a beautiful European woman.
 c) I met a beautiful European, woman.
 d) I met a beautiful , European, woman.
10. Choose the correct statement:
 a) My aunt who lives in Mumbai is a doctor.
 b) My aunt, who lives in Mumbai, is a doctor.
 c) My aunt, who lives in Mumbai is a doctor.
 d) My aunt who lives in Mumbai, is a doctor.

In each of the following questions, find out which part of the sentence has an error. If there is no mistake, the answer is 'No error'. (Q.No.11 to Q.No.15).

11. He obtained good marks (a) / not only in English essay (b) / but also in arithmetic which was (c) / full of complicated calculations. (d)
12. A person I met (a) / in the theatre (b) / was the play wright himself. (c) / No error (d)
13. Sunitha opened a almirah (a) / full of books (b) / and took one of them (c) / for reading. (d)
14. On my request (a) / Lalit introduced me (b) / to his friend (c) / who is singer and a scientist (d)
15. The famous Dr. Chandra (a) / is only dentist (b) / in our village. (c) / No error (d)

Choose the correct word to fill the gaps in the following (Q.No.16 to Q.No.25)

16. Which one is not one of the ways to give feedback when listening?
 a) repeating the information
 b) give advice
 c) reflect how the speaker probably feels
 d) put your statement in your own words to clarify
17. Which one is not part of active listening?
 a) Look at the person
 b) Encourage the person to talk
 c) Give advice
 d) Use empathy
18. Why is it called "active listening"?
 a) You stay active rather than sitting around
 b) It requires a lot of multi-tasking
 c) You use your eyes and brain as well as your ears
 d) You look very focused
19. William is talking to Joana, but Joana is not actively listening. William probably feels
 a) Relaxed
 b) Frustrated
 c) Cheerful
 d) Ashamed
20. A reflective listener _____
 a) Appreciated the message
 b) repeats the message's essential parts
 c) thinks about the speakers message
 d) ignores the details
21. Which of the following behaviours are part of active listening
 a) Maintain eye contact
 b) Nodding and making eye contact
 c) Asking for clarification
 d) All of these
22. Which of the following is a sign of active listening?
 a) paraphrasing, or summarizing what some has said
 b) interrupting, or talking over someone
 c) Changing the subject
 d) being totally silent while someone else talks
23. Zoe is giving a presentation on the Midwest region of the US. If you actively listening you might _____
 a) Speak over her to describe your trip to Netherlands.
 b) Raise your hand in the middle of the presentation to invite Zoe to the mall after school.
 c) Stay quiet while daydreaming about your trip to Lonavala in May.
 d) Raise your hand at the end to ask her to clarify if Kansa is part of that region.

24. Listening and hearing refer to:
 a) Mental and physical acts, respectively
 b) A specific act versus a general act
 c) Different things
 d) The same things
25. Which of the following kinds of communication do students spend most time engaged in?
 a) Listening
 b) Speaking
 c) Reading
 d) Writing

Choose the correct word to fill the gaps in the following (Q.No.26 to Q.No.30)

26. A co-worker comes to your office to introduce you to a friend of his. You:
 a) Smile and nod.
 b) You stand up, establish eye contact, smile and shake his hand.
 c) Wave and tell him how happy you are to meet him.
 d) Give him a "high five".
27. A four to five minutes presentation should have minimum
 a) 100 words
 b) 400 to 500 words
 c) 200 words
 d) 1000 words
28. In presentation hall, as a listener you
 a) Empathize with talkers
 b) Should shout
 c) Pass comments
 d) Distract
29. In a formal presentation, slides should be written in what colour
 a) Orange
 b) Red
 c) Blue
 d) Any colour is fine
30. What are the signals for understanding the content
 a) WH questions
 b) Check prepositions
 c) Underline all the nouns
 d) All

Identify the part of speech of the underlined words (Q.No.31 – Q.No.35)

31. They did not comply with his request.
 a) Verb
 b) Noun
 c) Preposition
 d) Adjective
32. She carried a large umbrella.
 a) Verb
 b) Noun
 c) Preposition
 d) Adjective
33. Do you know how to play billiards?
 a) Verb
 b) Noun
 c) Preposition
 d) Adjective

34. I must not forget to take my medicine.
 a) Verb b) Noun c) Preposition d) Adjective
35. I bought six mangoes.
 a) Verb b) Noun c) Preposition d) Adjective

Choose the appropriate answer from the given option (Q.No.36 to Q.No.40)

36. "Merge together" is an example of _____.
 a) Misplaced modifier b) Redundancies
 c) Dangling modifier d) Preposition
37. 'He nearly lost his way to the hotel.' Is an example of _____.
 a) Misplaced modifier b) Redundancies
 c) Dangling modifier d) Preposition
38. Which of the following sentence has a dangling modifier?
 a) To raise a good dog, patience is useful.
 b) Moving slowly, Bowie stalked the rabbits.
 c) After eating the cat food, Bowie belched.
 d) Having read the book, I think the film will be a hit.
39. Which of the following sentence has a misplaced modifier?
 a) A dog appeared in my dream that sang like an angel.
 b) The steak on the grill is hers.
 c) We slowly ate lunch that we had brought.
 d) The teacher said she would return our essays on Monday.
40. We use _____ to refer to any expression in which a modifier's meaning is contained in the word it modifies.
 a) Dangling modifiers b) Proper noun
 c) Redundancies d) Metonym

Choose the appropriate answer from the given option (Q.No.41 to Q.No.45)

41. Where _____?
 a) your sister works b) your sister work
 c) do you sister work d) does your sister work
42. When _____?
 a) did you arrived b) did you arrive
 c) were you arrived d) arrived

USN

--	--	--	--	--	--	--	--	--	--

Question Paper Version : C

First Semester B.E./B. Tech Degree Examination, Jan./Feb. 2023

Indian Constitution

Time: 1 hrs.

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.**

-
1. In which part of the Constitution, DPSP are mentioned?

a) Part III	b) Part IV	c) Part VII	d) Part VIII
-------------	------------	-------------	--------------
 2. Promoting Education and Economic interests of weaker sections of the society, especially the SC and ST comes under which of the following?

a) Fundamental Rights	b) Directive Principles of State Policy
c) Fundamental Duties	d) Fifth Schedule
 3. Which of the following statement is not correct about the Directive Principles of State Policy?

a) It determines to establish a "Welfare State"	b) It is the duty of the Citizen to apply DPSP Principles in making laws
c) To secure Uniform Civil Code for Citizen	d) To Ensure Equal pay for both Men and Women at Work.
 4. Which one among of the subsequent isn't the Directive Principles of State Policy?

a) Socialistic Directives	b) Gandhian Directives
c) Liberal Intellectual Directives	d) Intellectual Directives
 5. Who is the Present Vice President of India?

a) Droupadi Murmu	b) Ramnath Kovind
c) M. Venkaiah Naidu	d) Jagdeep Dhankar
 6. With reference to the Constitution of India, which of the following statement is not correct?

a) The Prime Minister shall be appointed by the President	b) Council of Ministers are appointed by the Prime Minister
c) Council of Minister shall be collectively responsible to Lok Sabha	d) Ministers hold office during the pleasure of the President.
 7. The Chancellor for all the Universities in the State is

a) Chief Minister	b) Education Minister
c) Governor of the State	d) High Court Chief Justice
 8. What is the age limit to contest for Lok Sabha Elections

a) 25 years	b) 26 years	c) 24 years	d) 30 years
-------------	-------------	-------------	-------------

9. What is the age limit for Rajya Sabha contestant?
 a) 30 years b) 35 years c) 25 years d) 31 years
10. Who is the present Lok Sabha Speaker?
 a) Birla b) Sri Birla c) Om Birla d) GD Birla
11. Chief Election Commissioner of India can be removed from the office by
 a) Both of houses of Parliament b) Union Council of Minister
 c) President of India d) Both a and b option combined
12. Who among the following was the first Chief Election Commissioner of India
 a) K. V. K Sundaram b) Sukumar Sen
 c) M. Patanjali Sastri d) S. P. Sen Verma
13. Who is the Present Chief Election Commissioner in India?
 a) Sunil Arora b) Suohil Chandra c) Rajiv Kumar d) Om Prakash Rawat
14. The Emergency Provisions of Indian Constitution have been borrowed from
 a) Germany b) Japan c) USSR d) USA
15. How many types of emergencies are there in Constitution of India?
 a) 1 b) 2 c) 3 d) 4
16. President can Proclaim a Financial Emergency under which among the following Articles?
 a) Article 350 b) Article 352 c) Article 356 d) Article 360
17. Which among the following Articles gives the power to the Central Government to take Pre-emptive action to protect any State against External aggression and Internal disturbances?
 a) Article 355 b) Article 358 c) Article 356 d) Article 360
18. Enact means
 a) Single chapter b) Single action
 c) Past a Law d) Rectify the mistakes in the Law
19. Election Commission does not conduct Election to
 a) The office of the President b) The office of the Vice - President
 c) The office of the Speaker of Lok Sabha d) State Legislature and Union Territory
20. Once the Proclamation of Financial Emergency is declared or approved by the Parliament it continues for
 a) Another six months b) One Year c) Two Years d) Indefinitely
21. When is the Budget Session month happens in Lok Sabha?
 a) July to September b) February to May
 c) April to May d) November to January
22. What is the minimum total Quorum to be present during the Lok Sabha Sessions?
 a) $\frac{1}{12}$ th b) $\frac{1}{10}$ th c) $\frac{1}{50}$ th d) $\frac{1}{15}$ th
23. Who is the present Chief Justice of India?
 a) D.Y. Chandrachud b) N.V. Rannana c) Jagdeep Dhankar d) None of these
24. Karnataka has bicameral system of State Legislature. Bicameral means
 a) Two Cameras b) Lok Sabha and Rajya Sabha
 c) Vidhan Sabha and Vidhan Parishad d) Only Vidhan Sabha

USN

--	--	--	--	--	--	--	--	--	--

Question Paper Version : A

First Semester B.E./B. Tech Degree Examination, Jan./Feb. 2023

Indian Constitution

Time: 1 hrs.

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.

1. The Indian Constitution is
 - a) Based on Conventions
 - b) A brief document
 - c) An evolved constitution
 - d) Written and bulky document
2. The Constituent Assembly adopted the Indian Constitution on
 - a) August 15, 1947
 - b) November 26, 1949
 - c) January 26, 1950
 - d) January 26, 1948
3. The Constitution of India declares India as
 - a) A Unitary State
 - b) A Federation
 - c) A Quasi federal State
 - d) A Union of States
4. The Constitution of India is
 - a) Levitary in form but federal in spirit
 - b) Levitary with strong federal bias
 - c) Is full of strong levitary features
 - d) Federal in form , but levitary in spirit
5. Chairman of the Drafting Committee was
 - a) Dr. B. R. Ambedkar
 - b) Dr. Rajendra Prasad
 - c) Jagajeevan Ram
 - d) Jawaharlal Nehru
6. What is the present number of Articles in Indian Constitution?
 - a) 395
 - b) 376
 - c) 445
 - d) 448
7. Which Amended Act added the word "Secular" in Constitution of India?
 - a) 42nd Amendment
 - b) 44th Amendment
 - c) 45th Amendment
 - d) 46th Amendment
8. The Government of India Act 1935 provided for
 - a) Diarchy at the center
 - b) Establishment of federal court
 - c) Provincial Autonomy
 - d) All of the above
9. The Constituent Assembly of India started its work in 1946 and completed its work in
 - a) November 1949
 - b) Jan. 1949
 - c) Dec. 1948
 - d) Jan. 1950
10. The Preamble of the Constitution of India has been amended so far
 - a) Four times
 - b) Thrice
 - c) Twice
 - d) Once

Version - A - 1 of 4

11. Which of the following writ is issued by the Supreme Court if it sends an order to restrain a person from acting in an office to which he is not entitled.
a) Habeas corpus b) Prohibition c) Cestiarari d) Quo warranto
12. Which of the following right mentioned in the Indian Constitution is absolute in nature?
a) Right to Equality b) Right to Freedom of Religion
c) Right to Constitutional Remedies d) Right to get equal pay for equal work
13. Which of the following Articles of the Constitution of India covers the Right to Freedom?
a) Articles 19 to 22 b) Articles 29 to 30 c) Article 32 d) Articles 14 to 18
14. During National emergency which of the following provision stands suspended.
a) DPSP b) Amendment procedures
c) Fundamental Rights d) Judicial Review
15. Which Fundamental Right ceased to be a Fundamental Right and became a Legal Right under the 44th Amendment of the Indian Constitution.
a) Right to Property b) Right to Primary Education
c) Right to Information d) Right to Life
16. Fundamental Rights in the Indian Constitution have been taken from the
a) Russian Constitution b) US Constitution
c) British Constitution d) Act of 1935
17. Who among the following headed the nine Judge Constitutional bench that declared the Right to Privacy as a Fundamental Right?
a) J.S Khechar b) Dipak Mism c) HJ Karia d) T.S Jhakar
18. Article 21A of the Constitution of India provides Right to _____
a) Work b) Privacy c) Equality d) Education
19. In the Indian Constitution as per Fundamental Rights, Abolition of Untouchability is a _____
a) Right to Equality b) Right to Freedom of Religion
c) Right against Exploitation d) Right to Constitutional Remedy
20. Directive Principles of State policy is borrowed from which Country.
a) Japan b) Ireland c) America d) Russia
21. In which part of the Constitution, DPSP are mentioned?
a) Part III b) Part IV c) Part VII d) Part VIII
22. Promoting Education and Economic interests of weaker sections of the society, especially the SC and ST comes under which of the following?
a) Fundamental Rights b) Directive Principles of State Policy
c) Fundamental Duties d) Fifth Schedule
23. Which of the following statement is not correct about the Directive Principles of State Policy?
a) It determines to establish a "Welfare State"
b) It is the duty of the Citizen to apply DPSP Principles in making laws
c) To secure Uniform Civil Code for Citizen
d) To Ensure Equal pay for both Men and Women at Work.
24. Which one among of the subsequent isn't the Directive Principles of State Policy?
a) Socialistic Directives b) Gandhian Directives
c) Liberal Intellectual Directives d) Intellectual Directives

25. Who is the Present Vice President of India?
 a) Droupadi Murmu
 b) Ramnath Kovind
 c) M. Venkaiah Naidu
 d) Jagdeep Dhankar
26. With reference to the Constitution of India, which of the following statement is not correct?
 a) The Prime Minister shall be appointed by the President
 b) Council of Ministers are appointed by the Prime Minister
 c) Council of Minister shall be collectively responsible to Lok Sabha
 d) Ministers hold office during the pleasure of the President.
27. The Chancellor for all the Universities in the State is
 a) Chief Minister
 b) Education Minister
 c) Governor of the State
 d) High Court Chief Justice
28. What is the age limit to contest for Lok Sabha Elections
 a) 25 years
 b) 26 years
 c) 24 years
 d) 30 years
29. What is the age limit for Rajya Sabha contestant?
 a) 30 years
 b) 35 years
 c) 25 years
 d) 31 years
30. Who is the present Lok Sabha Speaker?
 a) Birla
 b) Shri Birla
 c) Om Birla
 d) GD Birla
31. When is the Budget Session month happens in Lok Sabha?
 a) July to September
 b) February to May
 c) April to May
 d) November to January
32. What is the minimum total Quorum to be present during the Lok Sabha Sessions?
 a) $\frac{1}{12}$ th
 b) $\frac{1}{10}$ th
 c) $\frac{1}{50}$ th
 d) $\frac{1}{15}$ th
33. Who is the present Chief Justice of India?
 a) D.Y. Chandrachud
 b) N.V. Ramana
 c) Jagdeep Dhankar
 d) None of these
34. Karnataka has bicameral system of State Legislature. Bicameral means
 a) Two Cameras
 b) Lok Sabha and Rajya Sabha
 c) Vidhan Sabha and Vidhan Parishad
 d) Only Vidhan Sabha
35. How many Highcourts are there in India?
 a) 29
 b) 25
 c) 24
 d) 18
36. Under a single, integrated, hierarchical Judicial system, the High Courts in the states are directly under the
 a) President
 b) Governor of the State
 c) Union Parliament
 d) Supreme Court
37. The Supreme Court was set up under
 a) Pitts India Act
 b) Regulating Act
 c) Indian Council Act 1861
 d) Indian Councils Act 1892
38. A Judge of the Supreme Court will be removed on the basis of violation of Constitutional principles through
 a) Impeachment
 b) Retirement
 c) Appointment
 d) Judgment
39. Who is the Present Governor of Karnataka?
 a) Rama Devj
 b) Thawar Chand Gehlot
 c) Vajuhbhairwala
 d) HR Bhardwaj

40. Original Jurisdiction of the Supreme Court includes :
- Appeals in Civil cases
 - Appeals in Criminal cases
 - Interstate disputes
 - All of these
41. Chief Election Commissioner of India can be removed from the office by _____
- Both of houses of Parliament
 - Union Council of Minister
 - President of India
 - Both a and b option combined
42. Who among the following was the first Chief Election Commissioner of India?
- K. V. K Sundaram
 - Sukumar Sen
 - M. Patanjali Sastri
 - S. P. Sen Verma
43. Who is the Present Chief Election Commissioner in India?
- Sumil Arora
 - Suohil Chandra
 - Rajiv Kumar
 - Om Prakash Rawat
44. The Emergency Provisions of Indian Constitution have been borrowed from
- Germany
 - Japan
 - USSR
 - USA
45. How many types of emergencies are there in Constitution of India?
- 1
 - 2
 - 3
 - 4
46. President can Proclaim a Financial Emergency under which among the following Articles?
- Article 350
 - Article 352
 - Article 356
 - Article 360
47. Which among the following Articles gives the power to the Central Government to take Pre-emptive action to protect any State against External aggression and Internal disturbances?
- Article 355
 - Article 358
 - Article 356
 - Article 360
48. Enact means
- Single chapter
 - Single action
 - Fast a Law
 - Rectify the mistakes in the Law
49. Election Commission does not conduct Election to
- The office of the President
 - The office of the Vice - President
 - The office of the Speaker of Lok Sabha
 - State Legislature and Union Territory
50. Once the Proclamation of Financial Emergency is declared or approved by the Parliament it continues for
- Another six months
 - One Year
 - Two Years
 - Indefinitely

USN

--	--	--	--	--	--	--	--

Question Paper Version : D

First Semester B.E./B.Tech. Degree Examination, Jan./Feb. 2023
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.

1. _____ arises when a person is continuously thwarted in his attempts to reach a goal.
a) Fear b) Anxiety c) Depression d) Frustration
2. _____ Therapy is used for different types of addiction.
a) Rational Emotive b) Cognitive behavior
c) Contingency management d) All of these
3. Which are intimately related
a) Disease and Health b) Body and Health
c) Body and Mind d) All of these
4. Negative characteristic of friendship include all of these except
a) Oppressive b) Criticize in joking manner
c) Solve problems together d) Unsupportive
5. Body language and facial expressions are related to
a) Object communication b) Written communication
c) Oral communication d) Non-verbal communication
6. Basic instinct of life
a) Self preservation b) Sexual c) Social d) All of these
7. Our dress code is a example of _____
a) Verbal b) Non-verbal c) Written d) Spoken
8. In which age group drug addiction is a major problem?
a) Childhood b) Adolescent c) Adulthood d) Old age
9. Exercising regularly should be a/an _____ not a short term activity.
a) Life style b) Choice c) Obligation d) Compulsion

10. What is defined to be a condition in which a person develops intense cravings for the use of substance and the inability to control their behavior with regards to obtaining and using it?
a) Tolerance b) Abuse c) Addiction d) Dependence
11. According to WHO health is
a) A state of body and mind in a balanced condition
b) The reflection of smiling face
c) The symbol of economic property
d) A state of complete physical, mental and social wellbeing not merely absence of disease
12. Psychosis is characterized by
a) Loss of touch with reality
b) Prolonged emotional reaction to a given stress
c) Anxiety, fear, sadness, vague aches and pains
d) All of these
13. Which year did the World Health Organization first express the right to health as a fundamental human right?
a) 1946 b) 1952 c) 1987 d) 2000
14. Which of these things in health psychology concerned with?
a) What causes illness b) Who is responsible for illness
c) How should illness be treated d) All of these
15. Which of these is not an example of health behaviour?
a) Regular exercise b) Eating health food
c) Going to Jim d) Smoking
16. The benefits in eating a balanced diet
a) Good health b) Good mood and energy
c) Improved health and reduced illness d) All of these
17. Mental health hazards includes
a) Anxiety b) Depression
c) Mental disorder due to substance use d) All of these
18. In healthy diet as per WHO the amount of salt to be consumed by a person per day is
a) Less than 5 g b) Less than 7 g c) Less than 10 g d) Less than 25 g
19. BMI stands for
a) Body Material Index b) Body Mental Index
c) Body Mass Index d) Body Moving Index
20. Anorexia nervosa indicator?
a) Nervous disorder b) Sleeping disorder c) Eating disorder d) Physical disorder
21. What is a virus pandemic
a) A sharp and rapid epidemic involving more than one country
b) An outbreak which recurs again and again
c) A rapid global outbreak starting from a single focus
d) A characteristic of common cold virus and HIV

22. Of the following factors, which are the most important factors for virus spread and infection?
 a) Age b) Sex c) Genetic factor d) Travel
23. What does the reproductive number of a virus tell us?
 a) How virulent the infection will be
 b) How many people will die
 c) How many contacts will be infected from one case
 d) How long the incubation period will be
24. The feature common to both anorexia and bulimia nervosa is
 a) Fear of againing weight b) Refusal maintain normal body weight
 c) Purging to prevent weight gain d) None of these
25. The _____ test is used most often to test cardiovascular endurance.
 a) Hooper run b) Cooper run c) Carter run d) Dalton run
26. The ability to make maximum turn or twist on the joint is _____
 a) Flexibility b) Speed c) Strength d) Coordination
27. The ability of the heart, blood vessels and the respiratory system to supply oxygen and necessary fuel to muscles during exercise is called
 a) Health related fitness b) Skill related fitness
 c) Physical fitness d) Cardiovascular fitness
28. Ability of muscle to exert force one time is called
 a) Muscular Endurance b) Muscular strength
 c) Power d) Reaction time
29. An infected person is less likely to encounter a susceptible person mean a large proportion of the member of the group are immune
 a) Active immunity b) Herd immunity c) Passive immunity d) Specific immunity
30. Body language plays on important role in _____
 a) Communication b) Judgement c) Both (a) and (b) d) None of these
31. Examples of environmental stresses are
 a) Weather b) Traffic c) Finance d) Both (a) and (b)
32. Which of the following are major nutrients in our food
 a) Carbohydrate b) Proteins c) Vitamins and Minerals d) All of these
33. _____ communication includes tone of voice body language and facial expression.
 a) Non verbal b) Verbal c) Letter d) None of these
34. Anxiety, Depression, tiredness and loss of self esteem are _____ sign of illness.
 a) Mental b) Physical c) Social d) All of these
35. Which among the following are examples of pathogen?
 a) Bacteria b) Fungi c) Virus d) All of these
36. When international day against drug abuse is celebrated?
 a) 26th June b) 12th March c) 14th September d) 1st December

USN

--	--	--	--	--	--	--	--	--	--

Question Paper Version : C

First Semester B.E./B.Tech. Degree Examination, Jan./Feb. 2023

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.**

-
1. Examples of environmental stresses are
a) Weather b) Traffic c) Finance d) Both (a) and (b)
 2. Which of the following are major nutrients in our food
a) Carbohydrate b) Proteins c) Vitamins and Minerals d) All of these
 3. _____ communication includes tone of voice body language and facial expression.
a) Non verbal b) Verbal c) Letter d) None of these
 4. Anxiety, Depression, tiredness and loss of self esteem are _____ sign of illness.
a) Mental b) Physical c) Social d) All of these
 5. Which among the following are examples of pathogen?
a) Bacteria b) Fungi c) Virus d) All of these
 6. When international day against drug abuse is celebrated?
a) 26th June b) 12th March c) 14th September d) 1st December
 7. _____ contain a small piece of genetic code and a coat of protein and a fat molecule to protect them.
a) Bacillus b) Corona c) Mucar Saccharomyces d) None of the above
 8. Infections like gastritis, eye irritation, tuberculosis and pneumonia are caused by _____
a) Bacteria b) Fungi c) Virus d) None of these
 9. While taking to friends you do not pay attention to the skills of _____ communication.
a) Written b) Oral c) Audio d) Visual

10. Which of the following is a bad communication in relationship?
 a) Becoming defensive in heated discussion
 b) They do not pay share personal life with each other
 c) They never argue about important things
 d) They try to spend Quality time with each other
11. What is a virus pandemic
 a) A sharp and rapid epidemic involving more than one country
 b) An outbreak which recurs again and again
 c) A rapid global outbreak starting from a single focus
 d) A characteristic of common cold virus and HIV
12. Of the following factors, which are the most important factors for virus spread and infection?
 a) Age b) Sex c) Genetic factor d) Travel
13. What does the reproductive number of a virus tell us?
 a) How virulent the infection will be
 b) How many people will die
 c) How many contacts will be infected from one case
 d) How long the incubation period will be
14. The feature common to both anorexia and bulimia nervosa is
 a) Fear of againing weight b) Refusal maintain normal body weight
 c) Purging to prevent weight gain d) None of these
15. The _____ test is used most often to test cardiovascular endurance.
 a) Hooper run b) Cooper run c) Carter run d) Dalton run
16. The ability to make maximum turn or twist on the joint is _____
 a) Flexibility b) Speed c) Strength d) Coordination
17. The ability of the heart, blood vessels and the respiratory system to supply oxygen and necessary fuel to muscles during exercise is called
 a) Health related fitness b) Skill related fitness
 c) Physical fitness d) Cardiovascular fitness
18. Ability of muscle to exert force one time is called
 a) Muscular Endurance b) Muscular strength
 c) Power d) Reaction time
19. An infected person is less likely to encounter a susceptible person mean a large proportion of the member of the group are immune
 a) Active immunity b) Herd immunity c) Passive immunity d) Specific immunity
20. Body language plays on important role in _____
 a) Communication b) Judgement c) Both (a) and (b) d) None of these
21. _____ arises when a person is continuously thwarted in his attempts to reach a goal.
 a) Fear b) Anxiety c) Depression d) Frustration

38. Prashanth is showing physical, emotional and psychological exhaustion in his daily routine he is in the state of _____
 a) Stress b) Coping c) Burnout d) Resistance
39. Dileep gets satisfaction only when he gets appreciation and does everything perfectly. This is an instance of _____
 a) Social pressure b) Internal pressure c) Conflict d) Social stress
40. The following are the characteristics of positive stress
 a) It improves performance b) It feels exciting
 c) It motivates d) All of these
41. According to WHO health is
 a) A state of body and mind in a balanced condition
 b) The reflection of smiling face
 c) The symbol of economic property
 d) A state of complete physical, mental and social wellbeing not merely absence of disease
42. Psychosis is characterized by
 a) Loss of touch with reality
 b) Prolonged emotional reaction to a given stress
 c) Anxiety, fear, sadness, vague aches and pains
 d) All of these
43. Which year did the World Health Organization first express the right to health as a fundamental human right?
 a) 1946 b) 1952 c) 1987 d) 2000
44. Which of these things in health psychology concerned with?
 a) What causes illness b) Who is responsible for illness
 c) How should illness be treated d) All of these
45. Which of these is not an example of health behaviour?
 a) Regular exercise b) Eating health food
 c) Going to Jim d) Smoking
46. The benefits in eating a balanced diet
 a) Good health b) Good mood and energy
 c) Improved health and reduced illness d) All of these
47. Mental health hazards includes
 a) Anxiety b) Depression
 c) Mental disorder due to substance use d) All of these
48. In healthy diet as per WHO the amount of salt to be consumed by a person per day is
 a) Less than 5 g b) Less than 7 g c) Less than 10 g d) Less than 25 g
49. BMI stands for
 a) Body Material Index b) Body Mental Index
 c) Body Mass Index d) Body Moving Index
50. Anorexia nervosa indicator?
 a) Nervous disorder b) Sleeping disorder c) Eating disorder d) Physical disorder

