

CBCS SCHEME

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BMATS101

First Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024 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 notation prove that $\tan \phi = r \cdot \frac{d\theta}{dr}$. | 6 | L2 | CO1 |
| | b. | Find the angle between the curves $r = 6\cos\theta$ and $r = 2(1 + \cos\theta)$. | 7 | L2 | CO1 |
| | c. | Find the radius of curvature for the Folium of De-Cartes $x^3 + y^3 = 3axy$ at the point $\left(\frac{3a}{2}, \frac{3a}{2}\right)$ on it. | 7 | L2 | CO1 |
| OR | | | | | |
| Q.2 | a. | Show that the curves $r = a(1 + \sin\theta)$ and $r = a(1 - \sin\theta)$ cut each other orthogonally. | 8 | L2 | CO1 |
| | b. | Find the pedal equation of $r^n = a(1 + \cos n\theta)$. | 7 | L2 | CO1 |
| | c. | Using modern mathematical tool, write a program/code to plot the curve sine and cosine curve. | 5 | L3 | CO5 |
| Module – 2 | | | | | |
| Q.3 | a. | Using Maclaurin's series, expand $\sqrt{1 + \sin 2x}$ in powers of x upto the terms x^4 . | 7 | L2 | CO1 |
| | b. | If $U = e^{ax+by}f(ax-by)$, prove that $b\frac{\partial U}{\partial x} + a\frac{\partial U}{\partial y} = 2abU$. | 6 | L2 | CO1 |
| | c. | Find the extreme values of the function $\sin x + \sin y + \sin(x+y)$. | 7 | L3 | CO1 |
| OR | | | | | |
| Q.4 | a. | Evaluate the $\lim_{x \rightarrow 0} \left[\frac{a^x + b^x + c^x + d^x}{4} \right]^{\frac{1}{x}}$. | 8 | L2 | CO1 |
| | b. | If $U = f(2x - 3y, 3y - 4z, 4z - 2x)$, prove that $\frac{1}{2}\frac{\partial U}{\partial x} + \frac{1}{3}\frac{\partial U}{\partial y} + \frac{1}{4}\frac{\partial U}{\partial z} = 0$. | 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 $\frac{dy}{dx} + \frac{y}{x} = x^2y^6$. | 6 | L2 | CO2 |
| | b. | Find the orthogonal trajectories of the family $r = a(1 + \sin\theta)$. | 7 | L3 | CO2 |
| | c. | Find the solution of the equation $x^2(y - Px) = P^2y$ by reducing into Clairaut's form using the substitution $X = x^2, Y = y^2$. | 7 | L2 | CO2 |
| OR | | | | | |

| | | | | | |
|-------------------|----|---|---|----|-----|
| Q.6 | a. | Solve $(8xy - 9y^2)dx + 2(x^2 - 3xy)dy = 0$. | 6 | L2 | CO2 |
| | b. | A voltage Ee^{-at} is applied at $t = 0$ to a circuit of inductance L and resistant R . Find the current at any time t given that the current is initially zero when $t = 0$. | 7 | L3 | CO2 |
| | c. | Solve $x(y')^2 - (2x + 3y)y' + 6y = 0$. | 7 | L2 | CO2 |
| Module – 4 | | | | | |
| Q.7 | a. | i) Find the last digit in 7^{289} . ii) Find the remainder when $135 \times 74 \times 48$ is divided by 7. | 7 | L2 | CO3 |
| | b. | Solve the linear congruence $6x \equiv 15 \pmod{21}$. | 6 | L2 | CO3 |
| | c. | Using Wilson's theorem, show that $4(29)! + 5!$ is divisible by 31. | 7 | L2 | CO3 |
| OR | | | | | |
| Q.8 | a. | Solve the set of simultaneous congruences $x \equiv 5 \pmod{3}$, $x \equiv 2 \pmod{5}$, $x \equiv 1 \pmod{11}$. | 7 | L2 | CO3 |
| | b. | Solve $7x + 3y \equiv 10 \pmod{16}$, $2x + 5y \equiv 9 \pmod{16}$. | 6 | L2 | CO3 |
| | c. | Show that $2^{340} - 1$ is divisible by 31, using Fermat's little theorem. | 7 | L2 | CO3 |
| Module – 5 | | | | | |
| Q.9 | a. | Find the rank of the matrix $\begin{bmatrix} 1 & 2 & 4 & 3 \\ 2 & 4 & 6 & 8 \\ 4 & 8 & 12 & 16 \\ 1 & 2 & 3 & 4 \end{bmatrix}$ | 6 | L2 | CO4 |
| | b. | Solve the system of equation by using Gauss-Jordan method. $x + y + z = 8$, $-x - y + 2z = -4$, $3x + 5y - 7z = -14$ | 7 | L3 | CO4 |
| | c. | Using Rayleigh's power method, find the largest eigen value and the corresponding eigen vector of the matrix $A = \begin{bmatrix} 2 & -1 & 0 \\ -1 & 2 & -1 \\ 0 & -1 & 2 \end{bmatrix}$ by taking initial vector as $[1 \ 1 \ 1]^T$. Perform 6 iterations. | 7 | L3 | CO4 |
| OR | | | | | |
| Q.10 | a. | Solve the system of equation by using Gauss elimination method. $x + 2y + z = 3$, $2x + 3y + 3z = 10$, $3x - y + 2z = 13$ | 8 | L3 | CO4 |
| | b. | Solve the following system of equations by Gauss-Seidal method $20x + y - 2z = 17$, $3x + 20y - z = -18$, $2x - 3y + 20z = 25$ | 7 | L3 | CO4 |
| | c. | Using modern mathematical tool, write a programme/code to test the consistency of the equation: $x + 2y - z = 1$, $2x + y + 4z = 2$, $3x + 3y + 4z = 1$ | 5 | L3 | CO5 |

CBCS SCHEME

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BCHES102/202

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 _x and NO _x . | 07 | L3 | CO3 |
| OR | | | | | |
| 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 |
| Module – 2 | | | | | |
| 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 ₃ HT) suitable for optoelectronic devices. | 07 | L1 L2 | CO1 CO4 |
| | c. | Mention any three properties and applications of QLED. | 06 | L1 | CO4 |
| OR | | | | | |
| 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 |
| Module – 3 | | | | | |
| 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 |
| OR | | | | | |
| 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 |

8:20 - 11:30 Am

CBCS 2022 – SCHEME

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BCEDK103/203

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

COMPUTER AIDED ENGINEERING DRAWING

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max.Marks:100

Note: 1. Answer all four full question.

2. Grid sheets may be provided for making preparatory sketches.

| Module – 1 | | |
|------------|--|-------|
| Q. No. | | Marks |
| 1 | A regular hexagonal lamina of sides 25 mm is lying in such a way that one of its sides on HP while the side opposite to the side on which it rests is on VP. If the lamina makes 60° to HP, Draw the projections of the lamina. | 20 |
| Module – 2 | | |
| 2 | A pentagonal pyramid 25 mm sides of base and 50 mm axis length rests on HP on one of its slant triangular faces. Draw the projections of the pyramid when the axis appears to be inclined to VP at 45° . | 30 |
| Module – 3 | | |
| 3 | A sphere of 60 mm is placed centrally on the top face of a hexagonal prism side-35 mm and height 50 mm. Draw the isometric projection of the combination. | 25 |
| Module – 4 | | |
| 4 | A regular pentagonal pyramid of sides of base 35 mm and altitude 65 mm has its base on HP with a side of the base perpendicular to VP. The pyramid is cut by a section plane which is perpendicular to VP and inclined at 30° to HP. The cutting plane meets the axis of the pyramid at point 30 mm below the vertex. Obtain the development for the solid. | 25 |

Examiner 1:

Name: Dr. Narasimha

Signature: [Signature] 27/12/24

Examiner 2:

Name:

Signature:

Dr. Manjunatha C
[Signature] 27/12/2024

CBCS 2022 – SCHEME

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BCEDK103/203

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

COMPUTER AIDED ENGINEERING DRAWING

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max.Marks:100

Note: 1. Answer all four full question.

2. Grid sheets may be provided for making preparatory sketches.

| Module – 1 | | |
|------------|---|-------|
| Q. No. | | Marks |
| 1 | A square lamina ABCD of 40 mm side rests on corner A, such that the diagonal AC appears to be at 45° to VP. The two sides AD and AB containing the corner A make equal inclinations with HP. The surface of the lamina makes 30° with HP. Draw its top and front views. | 20 |
| Module – 2 | | |
| 2 | A square pyramid 35 mm sides of base and 60 mm axis length on HP on one of its slant triangular faces. Draw the projections of the pyramid when the axis appears to be inclined to VP at 45° . | 30 |
| Module – 3 | | |
| 3 | A regular pentagonal prism of base edge 30 mm and axis 60 mm is mounted centrally over a cylindrical block of 80 mm diameter and 25 mm thick. Draw isometric projection of the combined solids. | 25 |
| Module – 4 | | |
| 4 | A regular pentagonal prism of height 60 mm and base edges 30 mm rests with its base on HP. The vertical face closer to VP is 30° to it. Draw the development of the truncated prism with its truncated surface inclined at 60° to its axis and bisecting it. | 25 |

Examiner 1:

Name:

Signature:

Examiner 2:

Name:

Signature:

CBCS 2022 – SCHEME**BCEDK103/203**

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First/Second Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024**COMPUTER AIDED ENGINEERING DRAWING****Time: 3 Hours****(COMMON TO ALL BRANCHES)****Max.Marks:100****Note:** 1. Answer all four full question.

2. Grid sheets may be provided for making preparatory sketches.

| Module – 1 | | Marks |
|------------|--|-------|
| Q. No. | | |
| 1 | A hexagonal lamina of sides 25 mm rests on one of its corners on HP. The lamina makes 45° to HP and the diagonal passing through the corner on which it rests is inclined at 30° to VP. Draw its projections. | 20 |
| Module – 2 | | |
| 2 | A pentagonal pyramid 25 mm sides of base and 50 mm axis length rests on HP on one of the corners of the base such that the two base edges containing the corner on which it rests make equal inclinations with HP. Draw the projections of the pyramid when the axis of the pyramid is inclined to HP at 40° and to VP at 30° . | 30 |
| Module – 3 | | |
| 3 | A sphere of 60 mm is placed centrally on the top face of a pentagonal prism side-35 mm and height 50 mm. Draw the isometric projection of the combination. | 25 |
| Module - 4 | | |
| 4 | Draw the development of the truncated portion of the lateral faces of a pentagonal prism of 20 mm sides of base and 50 mm axis length with one of its rectangular faces parallel and nearer to VP so as to produce a one piece development. The inclined face of the truncated prism is 30° to its axis and passes through the right extreme corner of the top face of the prism. | 25 |

Examiner 1:

Name:

Signature:

Examiner 2:

Name:

Signature:

CBCS SCHEME

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BESCKB104/BESCK104B

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

Introduction to Electrical Engineering

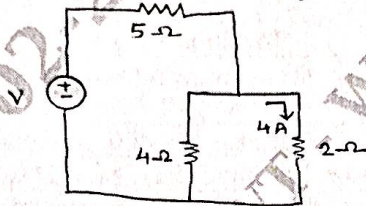
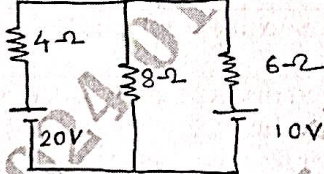
Time: 3 hrs.

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 nuclear power generation with the help of neat block diagram. | 7 | L1 | CO1 |
| | b. | In the circuit shown find the power delivered by the source.  Fig.Q.1(b) | 7 | L3 | CO1 |
| | c. | State and explain Ohm's law with its limitations. | 6 | L1 | CO2 |
| OR | | | | | |
| Q.2 | a. | State and explain Kirchhoff's current and voltage laws. | 7 | L1 | CO1 |
| | b. | Explain the general structure of electrical power system, using single line diagram. | 7 | L1 | CO1 |
| | c. | Calculate the currents in the network.  Fig.Q.2(c) | 6 | L3 | CO2 |
| Module – 2 | | | | | |
| Q.3 | a. | Obtain the behavior of voltage, current and power in a pure resistor connected to 1-φ A.C. supply. Draw the voltage, current and power waveforms. | 7 | L2 | CO2 |
| | b. | A current of average value 18.019A is flowing in a circuit to which a voltage of peak value 141.42V is applied. Determine: i) Impedance in polar form. ii) rms values of voltage and current. iii) Power consumed by the circuit. Assume voltage lags current by 30°. | 7 | L3 | CO2 |

1 of 3

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|--|----|--|---|----|-----|
| | c. | Define following terms related to sinusoidal waveform of AC parameter: i) Instantaneous value ii) Amplitude iii) Frequency iv) Time period v) Form factor vi) Peak factor. | 6 | L1 | CO1 |
|--|----|--|---|----|-----|

OR

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|-----|----|---|---|----|-----|
| Q.4 | a. | Derive the equation of the power consumed by R-L series circuit. Also draw the waveforms of voltage current and power. | 7 | L3 | CO2 |
| | b. | A circuit consist of a resistance of 20Ω , an inductance of $0.05H$ connected in series. A supply voltage of $230V$, $50Hz$ is applied across the circuit. Find the current, P.F. and power consumed by the circuit. Draw the vector diagram. | 7 | L3 | CO2 |
| | c. | What are the advantages of a 3- ϕ system over a single phase system? | 6 | L1 | CO1 |

Module – 3

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|-----|----|---|---|----|-----|
| Q.5 | a. | With a neat diagram, explain the construction of D.C. generator. | 7 | L1 | CO3 |
| | b. | A 4 pole lap connected DC generator has 600 armature conductors and run at $1200rpm$. The generator has total flux of $0.24wb$, calculate the emf induced. Find the speed at which it should be driven to produce the same emf when wave connected. | 7 | L3 | CO2 |
| | c. | Derive the torque equation of a D.C. motor. | 6 | L2 | CO2 |

OR

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|-----|----|---|---|----|-----|
| Q.6 | a. | A 4 pole, $250V$ series motor has wave connected armature with 1254 conductors. The flux per pole is $22mwb$, when the motor is taking $50A$. The armature and series field coil resistances are 0.3Ω and 0.2Ω respectively. Calculate the speed and torque of the motor and also power developed in watts. | 7 | L3 | CO2 |
| | b. | With usual notations derive an emf equation of D.C. generator. | 7 | L2 | CO2 |
| | c. | Explain the following characteristics of a D.C. shunt motor: i) Torque vs armature current ii) Speed vs armature current. | 6 | L2 | CO2 |

Module – 4

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|-----|----|---|---|----|-----|
| Q.7 | a. | Derive the emf equation of a transformer and hence obtain the voltage and current transformation ratios. | 6 | L2 | CO2 |
| | b. | With neat figure explain the construction of two types of rotor of a 3- ϕ induction motor. | 7 | L2 | CO1 |
| | c. | A $125KVA$ transformer has a primary voltage of $2000V$ at $60Hz$ with 182 and 40 turns on primary and secondary respectively. Calculate: i) no load secondary emf ii) Full load primary and secondary currents iii) Max value of flux in the core. | 7 | L3 | CO2 |

OR

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|------------|----|--|---|----|-----|
| Q.8 | a. | Explain how a rotating magnetic flux is created in the stator of 3- ϕ induction motor. | 7 | L2 | CO2 |
| | b. | A 3- ϕ , 6 pole, 50Hz induction motor has a slip of 3% at full load. Find the synchronous speed, rotor speed and the frequency of rotor current at full load. | 7 | L3 | CO2 |
| | c. | Explain the various losses in a transformer and how to minimize them. | 6 | L1 | CO2 |
| Module – 5 | | | | | |
| Q.9 | a. | Explain two way and three way control of lamps with circuit diagram and truth table. | 7 | L1 | CO2 |
| | b. | Define “unit” used for consumption of electrical energy and explain the two part tariff with its advantages and disadvantages. | 6 | L1 | CO2 |
| | c. | What is earthing? Explain plate earthing with neat figure. | 7 | L2 | CO4 |
| OR | | | | | |
| Q.10 | a. | What is electric shock? Write a note on precautions against electric shock. | 6 | L2 | CO5 |
| | b. | List out the power rating of household appliances including air conditioners, PCs, laptops, printers etc. | 7 | L2 | CO5 |
| | c. | Explain casing-capping wiring with neat diagram. | 7 | L2 | CO4 |

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BESCK104D/BESCKD104

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

Introduction to Mechanical Engineering

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. | Explain the role of mechanical engineering in society. | | 10 | L2 | CO1 |
| | b. | Explain the emerging trends and technologies in the following sectors. i) Manufacturing sector ii) Automotive sector iii) Aerospace sector iv) Marine sector. | | 10 | L2 | CO1 |
| OR | | | | | | |
| Q.2 | a. | With a neat sketch, explain the working principle of Hydel power plant. | | 10 | L2 | CO1 |
| | b. | Write short notes on: i) Fossil fuels ii) Bio-fuels. | | 10 | L2 | CO1 |
| Module – 2 | | | | | | |
| Q.3 | a. | What is lathe? With neat sketch explain the working principle of lathe machine. | | 6 | L2 | CO2 |
| | b. | With neat sketches, explain the following lathe operations. i) Turning operation ii) Knurling operation. | | 8 | L2 | CO2 |
| | c. | Differentiate between up milling and down milling. | | 6 | L2 | CO2 |
| OR | | | | | | |
| Q.4 | a. | What is CNC? With neat sketches, explain the basic components of CNC. | | 8 | L2 | CO2 |
| | b. | List the advantages and disadvantages of CNC. | | 6 | L1 | CO2 |
| | c. | List the advantages and disadvantages of 3D printing. | | 6 | L2 | CO2 |
| Module – 3 | | | | | | |
| Q.5 | a. | With a neat sketch, explain the components of I.C engine. | | 10 | L2 | CO3 |
| | b. | With a neat sketch, explain the working principle of 4-stroke petrol engine along with PV diagram. | | 10 | L2 | CO3 |
| OR | | | | | | |
| Q.6 | a. | What is an electric vehicle? Briefly explain the components of an electric vehicle. | | 10 | L2 | CO3 |
| | b. | State the advantages and disadvantages of EVs and hybrid vehicles. | | 10 | L2 | CO3 |

| Module – 4 | | | | | |
|------------|----|---|----|----|-----|
| Q.7 | a. | Write the composition, properties and applications of the following materials. i) Cast iron ii) High carbon steel iii) Alluminium iv) Copper. | 10 | L2 | CO4 |
| | b. | Write short notes on : i) Polymers ii) Shape memory alloys. | 10 | L2 | CO3 |
| OR | | | | | |
| Q.8 | a. | What is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. | 10 | L2 | CO4 |
| | b. | With neat sketches, explain 3 types of flames used in gas welding process. | 5 | L2 | CO4 |
| | c. | List the applications of welding. | 5 | L2 | CO4 |
| Module – 5 | | | | | |
| Q.9 | a. | With the help of block diagram, explain open loop and closed-loop control systems. | 10 | L2 | CO5 |
| | b. | With neat sketches, explain four basic robot configurations. | 10 | L2 | CO5 |
| OR | | | | | |
| Q.10 | a. | What is Automation? Explain 3 types of automation. | 10 | L2 | CO5 |
| | b. | Briefly explain characteristics of I.O.T. | 10 | 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

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|-----|----|--|---|----|-----|
| 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

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|-----|----|---|---|----|-----|
| 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 |

CBCS SCHEME

BPWSK106/206

USN

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Question Paper Version : A

First/Second Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024
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 options : (Q. No.1 to Q.No.10).

1. Which of these qualities are important in group discussion?
a) Emotional stability b) Hostility
c) Ignorance d) Aggressiveness
2. The first objective in a group discussion is to :
a) prove your superiority b) acts as a self – appointed a group
c) create subgroup d) catch the groups attention
3. In an interview when you do not know an answer, you should :
a) bluff b) keep guessing
c) admit you do not know the answer d) remain quiet
4. A summary placed at the beginning of the CV acts as
a) Synopsis b) Statement of Objectives
c) Preface d) Letter of recommendation
5. The application letter is :
a) a foreword
b) a description of your core strength and suitability for the Job
c) statement of your Job objective
d) a summary of your qualification and experiences.
6. The best way to apply for a Job is to submit a resume that is :
a) Self - recommending b) Suitable for any Job
c) Specifically written for the particular Job
d) Full of personal information.

7. Which kind of interview includes a process in which the employability of the Job applicant is evaluated?
 a) stress interview
 b) screening interview
 c) group interview
 d) behaviour interview
8. "Tease" or "Stress" questions are intended to judge :
 a) how the candidate handles them
 b) the candidate's intelligence quotient
 c) the candidate's stress level
 d) the candidates technical skills
9. The left part of our brain controls :
 a) emotions
 b) creativity
 c) imagination
 d) logic & reasoning
10. When should you arrive for you interview?
 a) at the time it is schedules
 b) 5 - 10 minutes after the scheduled time
 c) 5 - 10 minutes before the scheduled time
 d) go after 10 minutes
11. A panel interview is known as :
 a) panel interview
 b) face to face interview
 c) boards interview
 d) telephone interview
12. What are the successful strategies for interviews?
 a) Personal rapport
 b) good eye contact
 c) clear ideal of the key point
 d) all of the above
13. A precise should be written in _____ person :
 a) third person
 b) second person
 c) first person
 d) none of the above
14. What are the types of paragraph writing?
 a) narrative, persuasive
 b) descriptive
 c) expository
 d) all of these
15. Anticipating tone can promote.
 a) fear
 b) excitement
 c) aggression
 d) none of these
16. If the speaker uses the word, "but", he is making a point of _____.
 a) Background
 b) Theme
 c) Setting
 d) Conflict

Choose the Appropriate Verb (subject verb agreement) that agrees with the subject (Q.No. 17 to Q.No 19)

17. A neon and organge T - shirt _____ chosen by me at the boutique.
 a) is
 b) was
 c) were
 d) are
18. Everyone in the family _____ been questioned about the theft.
 a) has
 b) were
 c) have
 d) is
19. Each of the six boys in the class _____ their task.
 a) was completed
 b) were completed
 c) have completed
 d) has completed

Select the correct meaning of the underline idioms (Q.No. 20 to Q.No. 22)

20. He is leaving the Country for good.
 a) for better prospects b) for a good cause
 c) for ever d) for other's good
21. Companies producing a good play to the gallery to boost their sales.
 a) advertises b) caters to the public taste
 c) attempt to appeal to popular taste d) depend upon the public for approval
22. It was he who put a spoke in my wheel.
 a) tried to cause an accident b) destroyed the plan
 c) helped in the execution of the plan d) thwarted in the execution of the past

Choose the appropriate answer from the given options (Q.No. 23 to Q.No. 25)

23. Which of the below statements is correct in the case of the title of the blog post?
 a) it should describe the content b) it should be catchy
 c) it should contain a focus keyword d) all of the above
24. Creating and publishing video content on a blog is called.
 a) Vlog b) News c) Media Blog d) All of these
25. What are the 4 headings of a memo?
 a) From, date, to, subject b) To, from, date, subject
 c) Subject, to, date, from d) None of these

Choose the appropriate phrases from the given option to fill in the blanks :
 (Q.No. 26 to Q.No. 28)

26. "You can have my seat. I am _____ at the next stop", said a young girl to me in the local train.
 a) getting in b) getting down c) getting away d) getting up
27. I _____ all the instructions, still was not happy.
 a) carries away b) carried off c) carried on d) carried out
28. The union has _____ the strike.
 a) called of b) called off c) called in d) called into

Choose the appropriate answer from the given options (Q.No. 29 to Q.No. 30)

29. Which cannot come at the end of the sentence?
 a) a period b) a colon
 c) an exclamatory mark d) none of these
30. Which of these sentences has the comma in the right place?
 a) Please get me some eggs milk and some butter.
 b) Please get me some eggs, milk and some butter
 c) Please get me some eggs milk, and some butter
 d) Please get me some eggs milk and, some butter

Choose the correct tenses from the given option to fill in the blanks (Q.No. 31 to Q.No. 32)

31. Most workers _____ as labourers in factories where their wages were fixed.
a) is employed b) has employed c) were employed d) was employed
32. It _____ in Delhi since morning.
a) rained b) had been raining c) is raining d) has been raining

Read each sentence below and find out whether there is an error. The error, if any will be one of the part of the sentence which are marked as 1, 2, 3 and 4 (Q.No. 33 to Q.No 35)

33. Recently I visited (1) / Singapore and found (2) / the sceneries to be (3) / breath - taking (4).
a) 1 b) 2 c) 3 d) 4
34. The present datas (1) / shows that the (2) / death rate (3) / has fallen (4).
a) 1 b) 2 c) 3 d) 4
35. Darts are (1) / played by (2) / men as well (3) / as women (4).
a) 1 b) 2 c) 3 d) 4

Choose the appropriate answer from the given option (Q.No. 36 to Q.No 37)

36. The executive summary in technical writing is another name.
a) Cover letter b) Introduction c) Discussion d) All of these
37. A proposal is a medium aimed at _____.
a) instruction b) persuasion c) pre vention d) advice

Choose the appropriate answer for the given option (Q.No. 38 to Q.No. 40)

38. They will rebuild the entire block.
a) the entire block id being rebuilt b) the block may be rebuilt entirely
c) the entire block will have to be rebuilt d) the entire block will be rebuilt
39. The captain said to his men, "Stand at ease".
a) the captain urged his men to stand at ease.
b) the captain wanted his men to stand at ease.
c) the captain told his men that they should stand at ease
d) the captain commanded his men to stand at ease.
40. The future of women in India is quite bright and let us hope that they will justify their abilities by rising to the occasion. Napoleon was right when he declared that by educating women, we can educate the whole nation. Because a Country can never rise without the contribution of 50% of its population.
The passage best supports the statement that :
a) India is striving hard for the emancipation of women
b) All women should be well educated
c) A Nation can progress only when women are given equal rights and opportunities as men
d) Women ought to be imparted full freedom to prove their worth and contribute to the progress of the Nation.

Choose the appropriate answer for the given option (Q.No. 41 to Q.No. 50) **BPWSK106/206**

41. Which of these is the right format for writing the date in all the formats or a business letter?
a) 23/03/2023 b) 23rd March, 2023 c) March 23, 2023 d) both (b) and (c)
42. How is a complaint letter signed off?
a) Looking forward to getting prompt delivery
b) Looking forward to getting prompt and positive action
c) Looking forward to getting timely delivery of goods
d) None of these
43. How should a business letter look like?
a) It has to be professional and effective by using the template
b) It should be written using easy words so that an illiterate can also understand
c) It has to be written similarly to an informal letter
d) It should be written brief and short.
44. What is the sender's address of this letter?
a) Adidas India Pvt. Ltd. b) M/S Ram Prasad and Sons, Rewa (M.P)
c) Senders address not given d) None of these
45. _____ allows the user to send a file with an e – mail.
a) draft b) sent c) messenger d) attachments
46. What is the use of Carbon Copy (CC)?
a) recipient are invisible to all of the other recipients of the message in CC
b) recipients are visible to all of the other recipients of the message in the CC.
c) recipients are invisible to only one recipient of the message in the CC.
d) None of the above.
47. Positive gestures are body signals that make you look.
a) arrogant b) nervous c) relaxed d) hurtful
48. If a speaker winks after saying something it suggests to the audience that the subject is
a) non-serious b) incredible c) series d) true
49. In a presentation which things play an equal role?
a) context and voice b) text and font c) time and size d) sort and intent
50. Which of these is not a step in the listening process?
a) to stop talking b) receiving c) misinterpreting d) responding

* * * * *

USN

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BKSKK107/207

Question Paper Version : A

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

ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ

(COMMON TO ALL BRANCHES)

Time: 1 hrs.]

[Max. Marks: 50

ಸೂಚನೆಗಳು

1. ಎಲ್ಲ ಜಂ ಪ್ರಶ್ನೆಗಳಿಗೂ ಉತ್ತರಿಸಿರಿ. ಪ್ರತಿ ಪ್ರಶ್ನೆಗೆ ಒಂದು ಅಂಕ.
2. ಓ.ಎಂ.ಆರ್ ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಯು.ಎಸ್.ಎನ್ ಸಂಖ್ಯೆ ಹಾಗೂ ಪಶ್ಚಿಮ ಪ್ರಶ್ನೆಯ ಶ್ರೇಣಿಯನ್ನು ಅಂದರೆ A, B, C ಅಥವಾ D ಯನ್ನು ತಪ್ಪಿಲ್ಲದಂತೆ ಕಡ್ಡಾಯವಾಗಿ ಗುರುತಿಸುವುದು ಅಭ್ಯರ್ಥಿಯ ಜವಾಬ್ದಾರಿಯಾಗಿರುತ್ತದೆ.
3. ಓ.ಎಂ.ಆರ್ ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ನಿಗದಿಪಡಿಸಿರುವ ಸ್ಥಳದಲ್ಲಿ ಭರ್ತಿಮಾಡದ ಹಾಗೆಯೇ ಬಿಟ್ಟಲ್ಲಿ ಅಥವಾ ಭರ್ತಿಮಾಡಿದ ಮಾಹಿತಿಯಲ್ಲಿ ಯಾವುದೇ ವ್ಯತ್ಯಾಸವಿದ್ದಲ್ಲಿ ಅಂತಹ ಉತ್ತರ ಪತ್ರಿಕೆಗಳನ್ನು ರದ್ದು ಪಡಿಸಲಾಗುವುದು.
4. ಕೇವಲ ಒಂದು ಉತ್ತರವನ್ನು ಮಾತ್ರ ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಗುರುತಿಸತಕ್ಕದ್ದು. ಒಂದೆ ಪ್ರಶ್ನೆಗೆ ಎರಡು ಉತ್ತರವನ್ನು ಗುರುತಿಸುವುದು ಅಮಾನ್ಯ.
5. ಎಲ್ಲಾ ಉತ್ತರಗಳನ್ನು ನಿಮಗೆ ಒದಗಿಸಲಾದ ಓ.ಎಂ.ಆರ್ ಉತ್ತರ ಪತ್ರಿಕೆಯ ಹಾಳೆಯ ಮೇಲೆ ಕಪ್ಪು ಅಥವಾ ನೀಲಿ ಶಾಫಿಯ ಬಾಲ್‌ಪಾಯಿಂಟ್ ಪೆನ್ನಿನಿಂದ ಗುರುತು ಮಾಡಬೇಕು.

1. “ಪರಿಸರ, ಪರಂಪರೆ ಹಾಗೂ ಪ್ರತ್ಯಕ್ಷ ಜೀವನದ ಅನೇಕ ಸಂಸ್ಕಾರಗಳ ಮೂಲಕ ಮನುಷ್ಯನ ಅಂತರಂಗ ಪಡೆಯುವ ಪರಿಪಕ್ವತೆ” ಇದನ್ನು ಹಂಪ ನಾಗರಾಜಯ್ಯನವರು ಏನೆಂದು ಕರೆದಿದ್ದಾರೆ?
a) ಸಂಸ್ಕೃತಿ b) ಆಚರಣೆ c) ಸಮನ್ವಯ d) ಸೌಂದರ್ಯ
2. ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಅಂಡಯ್ಯ ಕವಿಯ ಕಾವ್ಯ ಯಾವುದು?
a) ಕಾವ್ಯ ಮೀಮಾಂಸೆ b) ಕಬ್ಬಿಗರ ಕಾವ್ಯ
c) ಕರ್ನಾಟಕ ಗತವ್ಯಭವ d) ಶ್ರೀರಾಮಾಯಣ ದರ್ಶನಂ
3. ರಾಜರಾಜರಲ್ಲಿ ಯುದ್ಧಗಳು ಏಕೆ ನಡೆಯುತ್ತಿದ್ದವು?
a) ರಾಜ್ಯ ರಕ್ಷಣೆ b) ಸಾಹಸ ಮನೋವೃತ್ತಿ c) a) ಮತ್ತು b) d) ಯಾವುದು ಅಲ್ಲ
4. ಕವಿರಾಜ ಮಾರ್ಗದಲ್ಲಿ ಹೇಳಿರುವಂತೆ ಕನ್ನಡಿಗರು ಎಂತಹವರು?
a) ಕೀರ್ತಿವಂತರು b) ಗುಣಶಾಲಿಗಳು c) ಸ್ವಾಭಿಮಾನಿಗಳು d) ಎಲ್ಲವೂ ಸರಿ

5. "ನಿಘಂಟು ತಜ್ಞ" ಎಂದು ಹೆಸರಾದ ಕನ್ನಡದ ಲೇಖಕರು ಯಾರು?
 a) ಪ್ರೊ.ಜಿ. ವೆಂಕಟಸುಬ್ಬಯ್ಯ
 b) ಬಿ.ಎಂ.ಶ್ರೀ
 c) ಕುವೆಂಪು
 d) ಪು.ತಿ.ನ
6. "ಕರ್ನಾಟಕ ಗತವೈಭವ" ಕೃತಿಯನ್ನು ರಚಿಸಿದವರು ಯಾರು?
 a) ಶ್ರೀರಂಗ
 b) ಆಲೂರು ವೆಂಕಟರಾಯರು
 c) ಮಾಸ್ತಿ ವೆಂಕಟೇಶ ಅಯ್ಯಂಗಾರ್
 d) ಸಿದ್ದಯ್ಯ ಪುರಾಣಿಕ
7. ರಾಯಚೂರಿನಲ್ಲಿ 1955 ರಲ್ಲಿ ನಡೆದ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಸಮ್ಮೇಳನದ ಅಧ್ಯಕ್ಷರು ಯಾರು?
 a) ಕೆ. ಎಸ್. ನರಸಿಂಹಸ್ವಾಮಿ
 b) ಡ.ರಾ.ಬೇಂದ್ರೆ
 c) ಶ್ರೀರಂಗ
 d) ಡಿ.ವಿ.ಜಿ
8. ಕನ್ನಡ ಭಾಷೆಯನ್ನು ವಿವಿಧ ರೂಪಗಳಲ್ಲಿ ಸುಮಾರು ಎಷ್ಟು ಜನರು ಆಡುನುಡಿಯಾಗಿ ಬಳಸುತ್ತಿದ್ದಾರೆ?
 a) 30 ದಶಲಕ್ಷ
 b) 40 ದಶಲಕ್ಷ
 c) 80 ದಶಲಕ್ಷ
 d) 60 ದಶಲಕ್ಷ
9. ವಿನೋಬಾ ಭಾವೆಯವರು ಕನ್ನಡ ಭಾಷೆಯ ಲಿಪಿಯನ್ನು ಏನೆಂದು ಕರೆದಿದ್ದಾರೆ?
 a) ಲಿಪಿಗಳ ರಾಣಿ
 b) ಯುವರಾಣಿ
 c) ಯುವರಾಜ
 d) ಲಿಪಿಗಳ ರಾಜ
10. ಭಾಷಿಯ ಸಮ್ಮತವಾದ ನಿಯಮಗಳನ್ನು ತಿಳಿಸುವ ಶಾಸ್ತ್ರಕ್ಕೆ ಏನನ್ನುತ್ತಾರೆ?
 a) ವಿಮರ್ಶೆ
 b) ವ್ಯಾಕರಣ
 c) ನಿಘಂಟು
 d) ಕಾಗುಣಿತ
11. ಶರಣ ಚಳವಳಿಯ ಪ್ರೇರಕ ಶಕ್ತಿ ಯಾರು?
 a) ಬಸವಣ್ಣ
 b) ಬಿಜ್ಜಳ ಮಹಾರಾಜ
 c) ಅಲ್ಲಮಪ್ರಭು
 d) ಅಕ್ಕಮಹಾದೇವಿ
12. "ರಾಮನಾಥ" ಅಂಕಿತದೊಡನೆ ವಚನಗಳನ್ನು ರಚಿಸಿದ ವಚನಕಾರ ಯಾರು?
 a) ಆಯ್ದಕ್ಕಿ ಮಾರಯ್ಯ
 b) ಜೇಡರದಾಸಿಮಯ್ಯ
 c) ಅಲ್ಲಮಪ್ರಭು
 d) ಆಯ್ದಕ್ಕಿ ಲಕ್ಕಮ್ಮ
13. ಅಕ್ಕಮಹಾದೇವಿಯ ವಚನಗಳ ಅಂಕಿತ ಯಾವುದು?
 a) ಅಮರೇಶ್ವರ ಲಿಂಗ
 b) ಗುಹೇಶ್ವರ
 c) ಚೆನ್ನಮಲ್ಲಿಕಾರ್ಜುನ
 d) ಕೂಡಲನಂಗಮದೇವ

14. ಗುರು, ಲಿಂಗ ಮತ್ತು ಜಂಗಮ ಈ ಮೂರಕ್ಕಿಂತ ಯಾವುದು ಅತ್ಯಂತ ಶ್ರೇಷ್ಠವೆಂದು ಆಯ್ಕೆ ಮಾರಯ್ಯ ತನ್ನ ವಚನದಲ್ಲಿ ಹೇಳಿದ್ದಾರೆ?
a) ವಿದ್ಯೆ b) ದಾನ c) ಬುದ್ಧಿ d) ಕಾಯಕ
15. "ಅದರಿಂದೇನು ಫಲ, ಇದರಿಂದೇನು ಫಲ" ಈ ಕೀರ್ತನೆಯನ್ನು ರಚಿಸಿದವರು ಯಾರು?
a) ಪುರಂದರ ದಾಸರು b) ವಿಜಯದಾಸರು c) ಕನಕದಾಸರು d) ಗೋಪಾಲದಾಸರು
16. ಕನಕದಾಸರ ಆರಾಧ್ಯದೈವ ಯಾರು?
a) ಚೆನ್ನಕೇಶವ b) ಆದಿಕೇಶವ c) ಸೋಮೇಶ್ವರ d) ಪುರಂದರ ವಿಠಲ
17. ಹಲವು ಕಾಲ ಕಲ್ಲು ನೀರೊಳಗಿದ್ದರೆ ನೆನೆದು ಅದು ----- ಆಗುವುದೆ?
a) ಶಿಲಾಮಂದಿರ b) ತಕ್ಷಶಿಲೆ c) ಅಮೃತಶಿಲೆ d) ಯಾವುದು ಅಲ್ಲ
18. ನವಿಲಿಗೆ ----- ಬರೆದವರು ಯಾರು ಎಂದು ಕನಕದಾಸರು ತಮ್ಮ ಕೀರ್ತನೆಯಲ್ಲಿ ಕೇಳುತ್ತಾರೆ?
a) ಕುಡಿ b) ಚಿತ್ತಾರ c) ಬಣ್ಣ d) ಚಿತ್ರ
19. ಶಿಶುನಾಳ ಶರೀಫರು ತಮ್ಮ ತತ್ವಪದದಲ್ಲಿ ಮಣ್ಣನ್ನು ಯಾವುದಕ್ಕೆ ಹೋಲಿಸಿದ್ದಾರೆ?
a) ಚೆನ್ನ b) ಬೆಳ್ಳಿ c) ವಜ್ರ d) ತಾಮ್ರ
20. ಎಂತಹ ಬೆಂಕಿಯನ್ನು ಹಚ್ಚಿ ಕುಂಬಾರರಿಗೆ ಕೊಡಗಳ ಸುಡುತ್ತಾಳೆ ಎಂದು ಶರೀಫರು ಹೇಳುತ್ತಾರೆ?
a) ಆಚಾರ b) ಅರಿವು c) ಧ್ಯಾನ d) ಭಕ್ತಿ
21. ಹುಲ್ಲಾಗಿ ಬೆಟ್ಟದಡಿ, ಮನೆಗೆ ಏನಾಗು ಎಂದು ಕವಿ ಡಿ.ವಿ.ಜಿಯವರು ಹೇಳುತ್ತಾರೆ?
a) ಮಲ್ಲಿಗೆಯಾಗು b) ಕನಕಾಂಬರವಾಗು c) ಸೇವಂತಿಗೆಯಾಗು d) ಗುಲಾಬಿಯಾಗು
22. ನಗುವು ಸಹಜಧರ್ಮ, ನಗಿಸುವುದು ಎಂತಹ ಧರ್ಮ ಎಂದು ಕವಿ ಹೇಳುತ್ತಾರೆ?
a) ಅಂತರಂಗದ ಧರ್ಮ b) ಪರಧರ್ಮ c) ಬಹಿರಂಗದ ಧರ್ಮ d) ಯಾವುದು ಅಲ್ಲ
23. ಋಷಿ ವಾಕ್ಯದೊಡನೆ ಯಾವ ಕಲೆ ಸೇರಿದರೆ ಜನಜೀವನ ಸುಖಕರವಾಗಿರುವುದೆಂದು ಕವಿ ಹೇಳುತ್ತಾರೆ?
a) ತಂತ್ರಜ್ಞಾನ b) ತಂತ್ರಾಂಶ c) ವಿಜ್ಞಾನ d) ಅಂತರ್ಜಾಲ

24. ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಡಿ.ವಿ.ಜಿ ಯವರ ಕಾವ್ಯ ಅಲ್ಲ?
a) ನಿವೇದನೆ b) ಉಮರನ ಒಸಗೆ c) ಕೇತಕಿವನ d) ಕೊಳಲು
25. ದ.ರಾ.ಬೇಂದ್ರೆಯವರ ಕಾವ್ಯನಾಮ ಏನು?
a) ಅಂಬಿಕಾತನಯದತ್ತ b) ಅನಂದಕಂದ c) ಕುವೆಂಪು d) ಶ್ರೀನಿವಾಸ
26. "ಕುರುಡು ಕಾಂಚಾಣ" ಎಂಬ ಪದ್ಯವನ್ನು ಬೇಂದ್ರೆಯವರ ಯಾವ ಕವನ ಸಂಕರಲನದಿಂದ ಆಯ್ದುಕೊಳ್ಳಲಾಗಿದೆ?
a) ಅರಳುಮರಳು b) ನಾದಲೀಲೆ c) ಗರಿ d) ಸಖೀಗೀತ
27. ಅಂಗಡಿಯೊಳಗೆ ಕಾಂಚಾಣದ ಸದ್ದು ಹೇಗಿದೆ ಎಂದು ಕವಿ ಹೇಳುತ್ತಾರೆ?
a) ಗಣಣ b) ತನನ c) ಝಣ ಝಣ d) ತೋಂ ತೋಂ
28. ಕೆಳಗಿನ ಕೃತಿಗಳಲ್ಲಿ ಕುವೆಂಪು ಅವರ ಕಾದಂಬರಿಯನ್ನು ಗುರುತಿಸಿ.
a) ಚಿತ್ರಾಂಗದಾ b) ದುರ್ಗಾಸ್ತಮಾನ c) ಸಂದ್ಯಾರಾಗ d) ಮಲೆಗಳಲ್ಲಿ ಮದುಮಗಳು
29. ಸರ್ವರಿಗೆ ಸಮಬಾಳು ! ಸರ್ವರಿಗೆ ----- ಎಂದು ಕವಿ ಕುವೆಂಪು ಹೇಳಿದ್ದಾರೆ?
a) ಸಮಪಾಲು ! b) ಸಹಬಾಳ್ವೆ ! c) ಸಮಾನ ಪಾಲು ! d) ಯಾವುದು ಅಲ್ಲ
30. "ವಿಪ್ಲವ" ಪದದ ಅರ್ಥವೇನು?
a) ಶಬ್ದಕೋಶ b) ಕ್ರಾಂತಿ c) ಚಿತ್ರ d) ವಿಶ್ವ
31. ಮಂಡ್ಯ ಜಿಲ್ಲೆಗೆ ನೀರನ್ನು ಒದಗಿಸುವ ಕೃಷ್ಣರಾಜಸಾಗರದ ಯೋಜನೆಯನ್ನು ತಯಾರಿಸಿದವರು ಯಾರು?
a) ಡಾ. ವಿಶ್ವೇಶ್ವರಯ್ಯ b) ಥಾಮಸ್ ಮನ್ರೊ c) ರಾ.ಹ.ದೇಶಪಾಂಡೆ d) ಯಾರು ಅಲ್ಲ.
32. ----- ಜಿಲ್ಲೆಯ ಸೌಂದರ್ಯದಲ್ಲಿ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಜೀವಂತರಾಗಿದ್ದಾರೆ.
a) ದಕ್ಷಿಣ ಕನ್ನಡ b) ಮಂಡ್ಯ c) ರಾಮನಗರ d) ಚಿಕ್ಕಮಗಳೂರು
33. ಡಾ. ವಿಶ್ವೇಶ್ವರಯ್ಯನವರು ಪ್ರವಾಸ ಹೊರಟಾಗ ಅವರ ಸೂಟ್ ಕೇಸಿನಲ್ಲಿ ಯಾವ ಪುಸ್ತಕದ ಪ್ರತಿಯನ್ನು ಇಟ್ಟುಕೊಳ್ಳುತ್ತಿದ್ದರು.
a) ವೇದ b) ಉಪನಿಷತ್ತು c) ಭಗವದ್ಗೀತೆ d) ರಾಮಾಯಣ

34. ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ವಿಶ್ವೇಶ್ವರಯ್ಯನವರು ಸ್ಥಾಪಿಸಿದ ಸಂಸ್ಥೆ?
 a) ಕಬ್ಬಿಣ ಮತ್ತು ಉಕ್ಕಿನ ಕಾರ್ಖಾನೆ, ಭದ್ರಾವತಿ b) ಮೈಸೂರು ಬ್ಯಾಂಕು
 c) ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ d) ಎಲ್ಲವೂ ಸರಿ
35. "ಎಷ್ಟೊಂದು ಶಕ್ತಿ ಪೋಲಾಗುತ್ತಿದೆ" ಈ ಮಾತನ್ನು ವಿಶ್ವೇಶ್ವರಯ್ಯನವರು ಯಾವ ಜಲಪಾತವನ್ನು ನೋಡಿ ಹೇಳಿದ್ದರು?
 a) ಜೋಗ b) ಶಿವನಸಮುದ್ರ c) ಹೆಬ್ಬೆ d) ಅರಸಿನ ಮಕ್ಕಿ
36. ಬಟ್ಟೆಗಳಿಗೆ ಬಣ್ಣಕಟ್ಟುವ ಕಲೆಗೆ ಏನೆಂದು ಹೆಸರು?
 a) ಚಮ್ಮಾರಿಕೆ b) ಬಣ್ಣಗಾರಿಕೆ c) ಹೈನುಗಾರಿಕೆ d) ಮಾತುಗಾರಿಕೆ
37. ಭಾರತದಲ್ಲಿ ತಯಾರಾಗುತ್ತಿದ್ದ ಬಟ್ಟೆಗಳಿಗೆ ಕೆಳಗಿನ ಯಾವ ದೇಶದಲ್ಲಿ ಬೇಡಿಕೆ ಇತ್ತೆಂದು ಲೇಖಕರು ಹೇಳುತ್ತಾರೆ?
 a) ಶ್ರೀಲಂಕಾ b) ಪಾಕಿಸ್ತಾನ c) ಗ್ರೀಸ್ d) ಯಾವುದು ಅಲ್ಲ
38. ಪರಿಸರದಲ್ಲಿ ಸಿಗುತ್ತಿದ್ದ ಕಚ್ಚಾ ವಸ್ತುಗಳ ಮುಖಾಂತರ ಕುಶಲಕರ್ಮಿಯು ----- ಪ್ರತಿಫಲಿತವಾಗುತ್ತಿತ್ತು ಎಂದು ಲೇಖಕರು ಹೇಳುತ್ತಾರೆ?
 a) ಕೈಕೌಶಲ್ಯ b) ನೈಪುಣ್ಯ c) ಸೌಂದರ್ಯ ಪ್ರಜ್ಞೆ d) ಎಲ್ಲವೂ ಸರಿ
39. ಸಾಂಪ್ರದಾಯಿಕ ಕರಕುಶಲ ಕಲೆಗಳ ಮೇಲೆ ಭಾರಿ ಪೆಟ್ಟು ಬಿದ್ದದ್ದು ಯಾವಾಗ?
 a) ಕೈಗಾರಿಕಾ ಕ್ರಾಂತಿಯ ಪರಿಣಾಮ b) ಯಂತ್ರಗಳ ಆವಿಷ್ಕಾರ
 c) ಬೇಡಿಕೆ ಕಡಿಮೆಯಾದದ್ದು d) ಯಾವುದೂ ಅಲ್ಲ
40. ಭಾರತದಲ್ಲಿ ಬೇರೆ ಬೇರೆ ಬಣ್ಣಗಳನ್ನು ನೀಡುವ ಸುಮಾರು ಎಷ್ಟು ಗಿಡಗಳಿವೆ ಎಂದು ಅಂದಾಜಿಸಲಾಗಿದೆ?
 a) 100 b) 300 c) 200 d) 350
41. "ಯುಗಾದಿ" ಕಥೆಯನ್ನು ಬರೆದ ಕನ್ನಡದ ಲೇಖಕರು ಯಾರು?
 a) ವಸುಧೇಂದ್ರ b) ಬಿ.ಲಂಕೇಶ್ c) ವೈದೇಹಿ d) ವಸುಂಧರಾ ಭೂಪತಿ
42. ಯುಗಾದಿ ಕಥೆಯಲ್ಲಿ ಚಿತ್ರಿತವಾಗಿರುವ ಹಿರಿಯಜೀವಿ ಗೋಪಣನವರ ವೃತ್ತಿ ಏನು?
 a) ವೈದ್ಯ b) ಶಿಕ್ಷಕ c) ಅಭಿಯಂತರ d) ಗುಮಾಸ್ತ

43. ಗೋಪಣ್ಣನವರ ಮಗ ಪ್ರಹ್ಲಾದ ಯಾವ ಪದವಿ ಪಡೆದ?
 a) ಬಿ.ಎಸ್ಸಿ b) ವೈದ್ಯ c) ಇಂಜಿನಿಯರಿಂಗ್ d) ಬಿ.ಕಾಂ
44. ಗೋಪಣ್ಣ ಮಾಸ್ತರರನ್ನು ಭೇಟಿಯಾಗಲು ಉರಿನಿಂದ ಬಂದ ಅವರ ಗೆಳೆಯ ಯಾರು?
 a) ಇಸ್ಮಾಯಿಲ್ b) ನಚಿಕೇತ c) ಸಾದಿಕ್ d) ಕಾಸಿಂಸಾಬರು
45. ಸರ್ಕಾರಿ ಆಸ್ಪತ್ರೆಯಲ್ಲಿ ಗೋಪಣ್ಣ ಮಾಸ್ತರರನ್ನು ಗುರುತಿಸಿದ ಅವರ ಶಿಷ್ಯ ಯಾರು?
 a) ರಾಧಾ b) ರುಕ್ಮಿಣಿ c) ರೇಖಾ d) ರೂಪಾ
46. ಡಾ.ಹಿ.ಚಿ.ಬೋರಲಿಂಗಯ್ಯ ಅವರ ಬುಡಕಟ್ಟು ಜೀವನವನ್ನು ಕುರಿತ ಕಾದಂಬರಿ ಯಾವುದು?
 a) ಬುಡಕಟ್ಟು ದೈವಾರಾಧನೆ b) ಆನೆಕಾಡು
 c) ಕಾಡು ಕಾಂಕ್ರಿಟ್ d) ಉಜ್ಜಿನಿ ಚೌಡಮ್ಮ
47. ಕಾಸಿಂಸಾಬರ ಮಗಳು
 a) ಚಿತ್ರ b) ವಂದನಾ c) ಚಾಂದನಿ d) ತಸೀಮಾ
48. ಹಾಡುವಳಿಯ ಹಿಂದಿನ ಹೆಸರೇನು?
 a) ಸಂಸ್ಕೃತಿಪುರ b) ಸಾಹಿತ್ಯಪುರ c) ಸಂಗೀತನಗರ d) ಸಂಗೀತಪುರ
49. ಸಹ್ಯಾದ್ರಿ ಶ್ರೇಣಿಯ "ಮೆಗಾನ್" ಎಂಬ ಹಳ್ಳಿಯಲ್ಲಿರುವ ಜನಾಂಗ ಯಾವುದು?
 a) ಕುಣಬಿ b) ಗೊರವ c) ದೀವ d) ಗೊಂಡ
50. ಮಾರ್ಗದರ್ಶಕ ಕುವೈಯ್ಯ ಹೆಗಲಿಗೆ ಏನನ್ನು ಏರಿಸಿಕೊಂಡಿದ್ದ?
 a) ಬಿಲ್ಲು b) ನಾಡಕೋವಿ c) ಶಲ್ಯ d) ಲಾಟೇನು

CBCS SCHEME

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BKBKK107/207

Question Paper Version : A

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

Balake Kannada

(COMMON TO ALL BRANCHES)

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.

Fill in the blanks with suitable words given:

1. niinu
a) yaaru b) adu c) yaake d) avaru
2. adu _____ pustaka?
a) yaara b) enu c) niivu d) avaru
3. idu _____ Kaaleju
a) niivu b) avaru c) avaLa d) yaake
4. avaru _____ gurugaLu
a) enu b) yaake c) namma d) elli
5. _____ nanna Amma
a) avaLu b) avanu c) yaake d) idu

Write appropriate words to fill the blank and make sentence meaningful.

6. idu _____ mane.
a) enu b) avaLa c) huDuga d) yaake
7. naanu _____ bandenu.
a) Kaalejige b) avana c) avara d) enu
8. niivu _____ hoguttiddira?
a) ellige b) enu c) avara d) avana

9. ivaru _____ akka.
a) nanna b) naNNa

c) enu

d) Nanna

10. adu yaara _____
a) Mane b) mane

c) enu

d) nanna

Change the word as per the model:
(Ex : doDDa + avanu = doDDavanu)

11. SaNNa _____
a) sannavanu

b) saNNavanu

c) SaNNavaNu

d) SANNAVANu

12. Chikka _____
a) ChikkavaLu

b) Chikkavanu

c) CHIKkavanu

d) CiKKaVNu

13. KeTTa _____
a) kettavanu

b) KeTTavanu

c) KeTTavaNu

d) KettavaNu

14. ettara _____
a) ettaradavanu

b) ettaravanu

c) Ettaradavanu

d) ETTaradavanu

15. mane _____
a) maneyavanu

b) Maneyavanu

c) ManeYavanu

d) maneyavaNu

Transform the following words of Kannada as per the given model:
(SaNNa - SaNNadu)

16. DoDDa _____
a) DoDDadu

b) doDDadu

c) doddadu

d) DODDADU

17. avara _____
a) avaradu

b) Avaradu

c) avaraDu

d) AVARADU

18. namma _____
a) nammadu

b) NammaDu

c) nammaDu

d) NaMMaDu

19. hoSa _____
a) hoSadu

b) Hosadu

c) HoSaDu

d) hoSaDu

20. avaLa _____
a) avaLadu

b) AvaLadu

c) avaladu

d) avanadu

Transform the following words of Kannada as per the given model:
(mane - maneyalli)

21. raSte _____
a) raSteyalli

b) Rasteyalli

c) RasTeyalli

d) raSteYalli

22. pustaka _____
a) pustakadalli

b) pustakaDalli

c) Pustakadalli

d) PUSTAKADalli

23. angaDi _____
a) angaDiyalli b) Angadiyalli c) angadiyalli d) angaDiyalli
24. byag _____
a) byaginalli b) byagiNalli c) byagalli d) byaGalli
25. daari _____
a) daariyalli b) daariYalli c) daarinalli d) Daariyalli

Fill in the blanks with suitable words to make the sentence meaningful:

26. avaLu nimma _____
a) akka b) Akka c) anna d) tamma
27. avara _____ yaavudu?
a) aane b) mane c) MANE d) Mane
28. nimma hesaru _____ ?
a) enu b) yavadu c) yaake d) Enu
29. avaLu nanna _____
a) snehite b) snehita c) geleya d) huDuga
30. Kaalejige hoguva _____ yaavadu?
a) Daari b) daari c) DAARI d) DaaRi

Change the word as per the model given:
(KuDi – KuDiyiri)

31. tinni _____
a) tinniri b) tinniyiri c) tindiri d) tandiri
32. ese _____
a) eseyiri b) eseyiri c) Eseyiri d) eseiri
33. nuDi _____
a) nuDiyiri b) Nudisiri c) NUDIYIRI d) nudiyiri
34. Savi _____
a) Saviyiri b) Savida c) Satya d) Sullu
35. mare _____
a) mareyiri b) Kareyiri c) MAREYIRI d) Mariri

Fill in the blanks using the correct form of the Kannada word to make sentence meaningful one.

36. niinu _____ (who)
a) yaaru b) Yaaru c) YAARu d) yaru
37. indu _____ uurige hogoNavaa? (we)
a) naavu b) Naavu c) NAAvu d) Naau

38. idu _____ pustaka. (her)
a) aVaLa b) avana c) avara d) nanna
39. _____ nanna snehita. (He)
a) AvaLu b) Avanu c) Avara d) Namma
40. indu _____ Kaalejige baruttiyaa? (You)
a) niinu b) Ninu c) neenu d) Neenu

Transform the following words into Kannada as per the model:
(ondu – ondaneYa)

41. eradu _____
a) eradaneya b) ondaneYa c) Hattaneya d) MooraneYa
42. muuru _____
a) muuraneya b) MuraneYa c) MuuRaneYa d) MUURANEYa
43. Aidu _____
a) aidaneYa b) AidaneYa c) aiduaneYa d) AIDANEYa
44. aaru _____
a) aaraneYa b) aaraneYa c) AraneYa d) AAraneYa
45. enTu _____
a) enTaneya b) EntaneYa c) entaneYa d) EnTaneya

Translate following words as per model: (iru – irutteve)

46. baru _____
a) barutteve b) Barutteve c) Bartivi d) bartivi
47. hogu _____
a) hogutteve b) hoguTTeve c) Hogutteve d) HOGUTTEVE
48. tinnu _____
a) tinnutteve b) Tinnutteve c) TinnuTTeve d) TINNUTTEVE
49. KoDu _____
a) Kodutteve b) KoDutteve c) KoDUtteve d) KODUTTEVE
50. maadu _____
a) maadutteve b) maaduTTeve c) maaDutteve d) maaDuTTeve

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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.

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) Intellectual 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

24. A major effect and health hazards from substance addiction is ____
 a) Loss of self control b) Injury
 c) Cardio vascular disorder d) Fetal damage
25. Addiction not only impairs a range of bodily function but also changes the way a person thinks is referred as ____
 a) Physiological complication b) Psychological complication
 c) Biological complication d) None of the above
26. ____ is an example for substance addiction.
 a) Shopping b) Video games c) Tobacco d) Using internet
27. Depression, Anxiety, Loneliness are the effects of
 a) Substance addiction b) Behaviour addiction
 c) Both (a) & (b) d) None of the above
28. What is SUD stands in addiction?
 a) Subjective unit of distress b) Substance unit of distress
 c) Substance use disorder d) None of the above
29. The purpose of using drugs are
 a) To detoxify the body b) To feel high pleasure, relieve stress, forget problems
 c) To boost physical health d) All the above
30. Addiction not only damages physical and mental health but also affects ____
 a) Relationships & Financial status b) Only friend circle
 c) Only economic status d) None of the above
31. A good listener is the one who
 a) Non judgmental b) More talkative
 c) Make uncomfortable d) Create stress
32. The value of good relationship depends on
 a) Self care b) Mutual respect
 c) Mutual money exchange d) None of the above
33. The art of transmitting information, ideas and attitudes from one person to another is referred as ____
 a) Tradition b) Obstruction c) Communication d) None of the above
34. Goals of Communication are
 a) Sending and receiving of information
 b) Inform, to persuade and to build relationships
 c) Encode and decoding of information d) All the above
35. One of the step to increase vocal clarity is ____
 a) Slow down the conversation b) Fasten the conversation
 c) Stop the conversation d) None of the above
36. Communication is the key to healthy relationships because it
 a) Avoid misunderstanding b) Create misunderstanding
 c) Brings expectation d) None of 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

CBCS SCHEME

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BPHYS102/BPHYS202

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

Applied Physics for CSE Stream

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.

2. Draw neat sketches where ever necessary.

3. VTU Formula Hand Book is permitted.

4. M : Marks , L: Bloom's level , C: Course outcomes.

5. Constants: Speed of Light $C = 3 \times 10^8 \text{ m/s}$, Boltzmann const. $K = 1.38 \times 10^{-23} \text{ J/K}^{-1}$,

Planck's const $h = 6.625 \times 10^{-34} \text{ JS}$, Acceleration due to gravity $g = 9.8 \text{ m/s}^2$,

Permittivity of Free space $\epsilon_0 = 8.854 \times 10^{-12} \text{ Fm}^{-1}$

| Module – 1 | | | M | L | C |
|------------|----|--|---|----|-----|
| Q.1 | a. | Define LASER and explain the interaction of radiation with matter for the induced absorption, spontaneous emission and stimulated emission. | 7 | L1 | CO1 |
| | b. | Discuss different types optical fibers based on modes of propagation and refractive index profile. | 9 | L2 | CO1 |
| | c. | Find attenuation in an optical fiber of length 500m, when a light signal of power 100mW emerges out of the fiber with a power of 90mW. | 4 | L3 | CO1 |
| OR | | | | | |
| Q.2 | a. | Obtain the expression for energy density of radiation using Einstein's co-efficient A and B and thus conclude $B_{12} = B_{21}$. | 9 | L2 | CO1 |
| | b. | Discuss point to point communication using optical fiber. | 6 | L2 | CO1 |
| | c. | In a diffraction grating experiment the LASER light undergoes second order diffraction for diffraction angle 1.48° . The grating constant $d = 5.05 \times 10^{-5} \text{ m}$ and the distance between the grating and source is 0.60m, find the wavelength of LASER light. | 5 | L3 | CO5 |
| Module – 2 | | | | | |
| Q.3 | a. | State and explain Heisenberg's uncertainty principle. Using the principle show that electron doesn't exist inside the nucleus. | 7 | L2 | CO2 |
| | b. | Set up Schrodinger's time independent wave equation in one dimension. | 8 | L2 | CO2 |
| | c. | A particle of mass $0.5 \text{ MeV}/c^2$ has kinetic energy 100 eV. Find its de-Broglie wavelength where 'C' is the velocity of light. | 5 | L3 | CO2 |
| OR | | | | | |
| Q.4 | a. | Find the Eigen values and Eigen functions for a particle in one dimensional infinite potential well. | 9 | L2 | CO2 |
| | b. | Discuss de-Broglie hypothesis. | 6 | L2 | CO2 |
| | c. | Calculate the energy of the first three states for an electron in one dimensional potential well of width 1 \AA . | 5 | L3 | CO2 |

| Module – 3 | | | | | |
|------------|----|--|---|----|-----|
| Q.5 | a. | Explain the representation of qubit using Bloch sphere. | 6 | L2 | CO2 |
| | b. | Discuss CNOT gate, matrix representation and its operation on four different input states. | 6 | L2 | CO2 |
| | c. | A linear operator X operates such that $X 0\rangle = 1\rangle$ and $X 1\rangle = 0\rangle$. Find the matrix representation of X | 8 | L3 | CO2 |
| OR | | | | | |
| Q.6 | a. | State the Pauli's matrices and apply Pauli matrices on the states $ 0\rangle$ and $ 1\rangle$ states. | 8 | L3 | CO2 |
| | b. | Elucidate the differences between classical and quantum computing. | 6 | L2 | CO2 |
| | c. | Explain matrix representation of 0 and 1 states and apply identify operator I to $ 0\rangle$ and $ 1\rangle$ states. | 6 | L3 | CO2 |
| Module – 4 | | | | | |
| Q.7 | a. | Enumerate the failures of Classical Free Electron [CFET] Theory and mention the assumptions of Quantum Free Electron Theory [QFET] | 7 | L2 | CO3 |
| | b. | Describe Meissner's effect. Distinguish between Type I and Type II superconductors. | 8 | L2 | CO3 |
| | c. | Lead has a superconducting transition temperature of 7.26K. If initial field at 0K is $50 \times 10^3 \text{ Am}^{-1}$, calculate the critical field at 6K. | 5 | L3 | CO3 |
| OR | | | | | |
| Q.8 | a. | Define Fermi factor. Discuss the variation of Fermi factor with temperature and energy. | 7 | L2 | CO3 |
| | b. | Explain the phenomenon of super conductivity. Discuss qualitatively BCS theory of super conductivity. | 8 | L2 | CO3 |
| | c. | Calculate the probability of occupation of an energy level 0.02eV above Fermi level at temperature 200K. | 5 | L3 | CO3 |
| Module – 5 | | | | | |
| Q.9 | a. | Discuss timing in linear motion, uniform motion, slow in and slow out. | 8 | L2 | CO4 |
| | b. | Enumerate the difference between inferential and descriptive statistics. | 6 | L2 | CO4 |
| | c. | In an optical fiber experiment, the light passing through the fiber, made a spot diameter of 8mm on the screen. The distance between the end of the optical fiber cable and the screen is 0.031m. Calculate the angle of acceptance and numerical aperture of given optical fiber. | 6 | L3 | CO5 |
| OR | | | | | |
| Q.10 | a. | Describe Jumping and parts of Jump. | 8 | L2 | CO4 |
| | b. | Discuss the salient features of Normal distribution using Bell curves. | 7 | L2 | CO4 |
| | c. | While animating speeding up car animation, the total distance covered over 6 frames is 25m, Calculate the base distance. | 5 | L3 | CO4 |

CBCS SCHEME

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BPOPS103/203

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

Principles of Programming Using C

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. | Define a Computer. Explain the characteristics of a digital computer. | 10 | L1 | CO1 |
| | b. | Explain the basic structure of a C program with a neat diagram. | 10 | L1 | CO1 |
| OR | | | | | |
| Q.2 | a. | With a neat diagram explain the steps in the execution of C program. | 10 | L1 | CO1 |
| | b. | Explain the input and output statements in C with examples for each. | 10 | L2 | CO1 |
| Module - 2 | | | | | |
| Q.3 | a. | Explain the various operators in C. | 10 | L2 | CO1 |
| | b. | Explain the different forms of if statement with flowcharts. | 10 | L1 | CO2 |
| OR | | | | | |
| Q.4 | a. | Explain the switch statement with an example. | 10 | L2 L3 | CO2 |
| | b. | Explain break and continue statements with examples for each. | 04 | L2 L3 | CO2 |
| | c. | Write a C program to find the largest of 3 numbers using nested if statement. | 06 | L3 | CO2 |
| Module - 3 | | | | | |
| Q.5 | a. | Discuss in detail the parts of a user-defined function. | 10 | L2 | CO3 |
| | b. | Discuss the storage classes in C. | 10 | L2 | CO3 |
| OR | | | | | |
| Q.6 | a. | Define recursion. Write a C program to find the factorial of 'n' using recursion. | 05 | L1 L3 | CO3 |
| | b. | What is an array? Explain the declaration and initialization of 1-D arrays. | 05 | L1 L2 | CO3 |
| | c. | Write a C program to perform Matrix Multiplication. | 10 | L3 | CO3 |
| Module - 4 | | | | | |
| Q.7 | a. | Write functions to implement string operations such as compare concatenate and string length. Convince the parameter passing techniques. | 10 | L3 | CO4 |
| | b. | Develop a program using pointers to compute, sum, mean and standard deviation of all the elements stored in an array. | 10 | L3 | CO4 |
| OR | | | | | |
| Q.8 | a. | Define a pointer. Discuss the declaration of pointer variables. | 05 | L2 | CO4 |
| | b. | Discuss the various string handling functions in C. | 10 | L2 | CO4 |
| | c. | Write a C program to swap two numbers using call by reference technique. | 05 | L3 | CO4 |
| Module - 5 | | | | | |
| Q.9 | a. | Define a structure. Explain the types of structure declarations with examples for each. | 10 | L1 | CO4 |
| | b. | Implement structures to read, write and compute average marks and the students scoring below and above average in a class of 'N' students. | 10 | L3 | CO4 |
| OR | | | | | |
| Q.10 | a. | Differentiate between structures and union. | 06 | L2 | CO5 |
| | b. | Define a structure by name DOB consisting of three members dd, mm and yy. Develop a C program that would read values to the individual member and display the date in the form dd/mm/yyyy. | 06 | L3 | CO5 |
| | c. | Explain the various file operations with syntax for each. | 08 | L2 | CO5 |

CBCS SCHEME

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BETCK105E/BETCKE105

First Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024 Renewable Energy Sources

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. | Briefly explain the principles of renewable energy, energy and sustainable development, fundamental and social implication of renewable energy. | 10 | L2 | CO1 | |
| | b. | Briefly describe biomass energy and Internet of energy. | 10 | L2 | CO1 | |
| OR | | | | | | |
| Q.2 | a. | Briefly describe energies from ocean. | 10 | L2 | CO1 | |
| | b. | Briefly describe geothermal energy and solar energy. | 10 | L2 | CO1 | |
| Module – 2 | | | | | | |
| Q.3 | a. | Explain solar radiation and its estimation on horizontal and inclined surfaces. | 10 | L2 | CO2 | |
| | b. | With neat sketches, explain the working principles of Pyranometer and Pyreheliometer. | 10 | L2 | CO2 | |
| OR | | | | | | |
| Q.4 | a. | Explain solar pond and solar distillation. | 10 | L2 | CO2 | |
| | b. | Explain the principle of photovoltaic system with applications. | 10 | L2 | CO2 | |
| Module – 3 | | | | | | |
| Q.5 | a. | Explain with a neat block diagram, the basic components of Wind Energy Conversion System (WECS) specifying the components of a wind turbine. | 10 | L2 | CO3 | |
| | b. | Stating advantages and disadvantages, elaborate in detail, the working principle of a horizontal axis wind turbines. | 10 | L2 | CO3 | |
| OR | | | | | | |
| Q.6 | a. | Elaborate on photosynthesis process. | 6 | L2 | CO3 | |

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|-------------------|----|---|----|----|-----|
| | b. | Explain biomass conversion technologies. | 8 | L2 | CO3 |
| | c. | Explain with a neat sketch, downdraft garifier. | 6 | L2 | CO3 |
| Module – 4 | | | | | |
| Q.7 | a. | Explain with sketches, working of single and double basin tidal power plants. | 10 | L2 | CO4 |
| | b. | Summarize the advantages and limitation of tidal power generation. | 10 | L2 | CO4 |
| OR | | | | | |
| Q.8 | a. | Explain with sketches, working principles of open and closed cycle Ocean Thermal Energy Conversion (OTEC) system. | 10 | L2 | CO4 |
| | b. | What are the problems associated with OTEC? | 10 | L2 | CO4 |
| Module – 5 | | | | | |
| Q.9 | a. | Classify fuel cells and explain the working of hydrox (H_2 , O_2) fuel cell. | 10 | L2 | CO5 |
| | b. | Describe in detail about hydrogen energy storage and applications. | 10 | L2 | CO5 |
| OR | | | | | |
| Q.10 | a. | Explain with a sketch, electrolysis method used for hydrogen energy production. | 10 | L2 | CO5 |
| | b. | Discuss the problems associated with hydrogen energy. | 10 | L2 | CO5 |

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Question Paper Version : B

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.

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 2025.

1. The _____ for the Bullet Train project was laid recently.
a) railway track b) signaling system c) foundation stone d) None of these
2. 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
3. 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
4. The bullet train schedule to run between _____ and _____.
a) Mumbai and Ahmedabad b) Mumbai and Delhi
c) Mumbai and Gujarat d) None of these
5. The project is expected to be _____ by December 2023.
a) completed b) operationalised c) started d) None of these

Choose the correct option :

6. _____ was visible at this late hour.
a) No man b) No c) No men d) None of these
7. The tycoon had expired before the _____.
a) Physician arrives b) Physician arriving
c) Physician arrived d) Physician had arrived
8. When _____, I will tell him everything.
a) he is coming b) he comes c) he will come d) None of the above
9. Which of these must be avoided in Presentation?
a) Proper grammar b) Complex words c) Short sentence d) Clear voice
10. Which of these can be used to break the monotony in a speech?
a) Humour b) Constant tone c) Low voice d) Sad story
11. 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.
12. 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

Fill in the banks with appropriate prefixes :

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

Choose the pairs of word / phrases :

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

Choose the correct subject – verb concord in the sentences :

17. Diabetes _____ a silent killer.
a) is b) are c) were d) None of these
18. 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 :

19. Sir, I _____ passed my B.Tech in 2003
a) have b) has c) was d) Not required

20. We _____ finished our assignment just now.
a) have b) has c) had d) None of these
21. 'Communication' The word originates from Laten word
a) Communism b) Communico c) Communicative d) None of these
22. Communication is a _____ process.
a) one way b) two - way c) three - way d) None of these
23. 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 wise d) Horizontal
24. 'Poor Printing' it is a type of Barrier _____
a) Verbal barrier b) Psychological barrier
c) Physiological barrier d) Physical barrier
25. 'Transcendental meditation' is example of _____ Communication.
a) Extrapersonal b) Interpersonal c) Intrapersonal d) Non - verbal
26. The most straight forward, basic interpersonal communication meaning is _____ Communication.
a) Mass Communication b) Interpersonal
c) Extrapersonal d) None of these
27. Flashing eyes, avoiding eye contact may also cause _____ to effective Communication.
a) Vernal barrier b) Listening barrier
c) Psychological barrier d) Non - Verbal barrier
28. 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
29. '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
30. In Organizations, informal communication also permeates. This informal communication is called _____
a) Personal b) Professional c) Grapevine d) None of thee
31. 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
32. 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
33. The consonant sounds that come before vowel sound are called _____
a) Coda b) Onset c) Medical d) None of these

34. What is the division of syllables of word 'Information'?
- a) in-form-ation b) inform-ation c) in-formation d) in - for - ma - tion
35. Transcribe the word 'daughter'.
- a) / 'dɔ : t ə / b) / dɔ 't ə / c) / dɔ : tɪ / d) / d 3 : t ə /
36. '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
37. Find the silent letter in the word 'though'.
- a) th b) ou c) ugh d) gh
38. In the word 'Sheep' often mispronounced sound is
- a) /ʃ/ b) /S/ c) ee d) p
39. Correct the spelling of the following word :
- a) Renumeration b) Remuneration c) Remunation d) Remuration
40. How to pronounce the word 'Next'?
- a) nekast b) nekest c) nekist d) nekst
41. I have _____ to buy a car. (Use appropriate noun)
- a) no rupees b) no notes c) no money d) no moneys
42. _____ 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
43. The flower smells _____ (Appropriate Adjective is)
- a) sweet b) sweetly c) sweeter d) sweetest
44. It is _____ hotter today, (place an adverb).
- a) most b) very c) more d) much
45. Hardly had he arrived _____ the portico crumbled. (Choose correct conjunction)
- a) than b) then c) when d) None of these
46. We could barely do anything. (suitable question Tag).
- a) Couldn't we? b) Could we? c) Can we? d) None of these
47. A Person who believes in God, we call him
- a) Theist b) Atheist c) Eccentric d) Spinster
48. '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
49. Flour is made _____ wheat. (suitable preposition)
- a) of b) by c) from d) in
50. _____ Humanity is in danger. (Choose the correct option).
- a) A b) An c) The d) Not needed any article

CBCS SCHEME

BICOK107/207

USN

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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.

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

Version – A – 1 of 4

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) $\frac{1}{3}^{\text{rd}}$ of total strength b) $\frac{1}{4}^{\text{th}}$ of total strength
 c) $\frac{1}{10}^{\text{th}}$ of total strength d) $\frac{1}{6}^{\text{th}}$ 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) 86th CAA 2002 b) 87th CAA 2003 c) 91st CAA 2003 d) 100th 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) $1/10^{\text{th}}$ b) $2/3^{\text{rd}}$ c) $1/2^{\text{th}}$ d) $1/5^{\text{th}}$

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CBCS SCHEME

BIDTK158/BIDTK258/22BD16

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Question Paper Version : A

First/Second Semester B.E./B.Tech./B.Des. Degree Examination, Dec.2023/Jan.2024 Innovation and Design Thinking

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 stages of the design thinking process in order are
 - a) Understand > Draw > Ideate > Create > Test
 - b) Empathize > Define > Ideate > Prototype > Test
 - c) Empathize > Design > Implement > Produce > Test
 - d) Understand > Define > Ideate > Produce > Try
2. The comprehensive principle of design thinking does not include
 - a) Relationship
 - b) Collaboration
 - c) Communication
 - d) Suppliers
3. Design Thinking typically help in _____.
 - a) Innovation
 - b) Data Analysis
 - c) Marketing Management
 - d) Operation Management
4. Mr. ABC wants to design a new bed that he can sell to nursing homes to use with their patients. However, Mr. ABC doesn't want anything to do with older adults or people with disabilities. According to the design thinking process, Mr. ABC will face problems because he is missing.
 - a) Empathy
 - b) Creativity
 - c) Practicality
 - d) Imagination
5. The three I's of design thinking do not include
 - a) Interest
 - b) Implementation
 - c) Inspiration
 - d) Ideation
6. In design, where does the information used to put together a problem statement come from?
 - a) The design stage
 - b) The ideate stage
 - c) The define stage
 - d) The testing stage

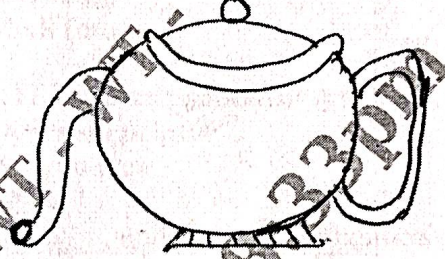
7. Collecting _____ is an important portion of testing a prototype in the test stage of design.
a) Pictures b) Money c) Feedback d) E mails
8. A pototype is a simple experimental model of a proposed solution used to
a) Test ideas b) Validate ideas
c) Both d) None of these
9. Identify the correct statement
a) To derive the power of design thinking, individuals, teams and organizations must have a leap of faith about the existence of a solution.
b) Leap of faith is the page in the manual of design thinking containing the core philosophy about design thinking
c) Design thinking presupposes that some people are inherently creative and become successful in creative product development. The team should have atleast one such person.
d) None of these
10. Which is not basic modes of thinking?
a) Analytical b) Judical c) Critical d) Synthetic
11. Design thinker in an organization are
a) People b) Employees
c) Managers d) All of these
12. What is the main objective of the empathize stage in design thinking?
a) Understanding the problem b) Generating ideas
c) Identifying the user needs d) Building prototypes
13. Mind mapping diagram provides information about
a) Customer and product interaction
b) Idea and its interaction among other ideas
c) Visualization of problem statement
d) None of these
14. Value chain analysis process provides
a) Better understanding of customer expectations
b) Uncover the information about partners capabilities
c) Better market analysis
d) All of these
15. Which one of the below helps in generating hypothesis about potential new business opportunities?
a) Prototype b) Rapid concept development
c) Ideate d) Learning launches
16. A visualization activity was performed by the employees of a bulb manufacturing company which included information in the form of
a) Images of various types of bulbs produced by the company
b) Its application suitability to the customers in the form of stories
c) Clears or reduces the possibilities of unmatched mental models/pictures
d) All of the above

17. The goal of the prototype phase is
 - a) To understand what component of your idea didn't work
 - b) To understand what component of your idea worked
 - c) Both of them
 - d) None of them
18. _____ is a tool to use the design details and terms to develop new business opportunities.
 - a) Visualization
 - b) Journey mapping
 - c) Rapid concept development
 - d) None of these
19. Which tool is used for feasibility check of assumptions of the new business ideas?
 - a) Value chain analysis
 - b) Rapid concept development
 - c) Prototype
 - d) Assumption testing
20. Identify the process that brings users and designers together to work towards a shared goal.
 - a) Problem statement formulation
 - b) Customer co-creation
 - c) Value chain analysis
 - d) None of these
21. Which process is a quick and inexpensive learning test to collect market driven data?
 - a) Learning launches
 - b) Prototyping
 - c) Customer co-creation
 - d) None of these
22. What is an example of a method for conducting user research?
 - a) Surveys
 - b) Usability testing
 - c) Design sprints
 - d) All of these
23. What is the process of collecting and analyzing data on how users interact with a design in real time called?
 - a) Real Time design interaction capture
 - b) Real Time design analysis
 - c) Real Time design interaction analysis
 - d) Real Time design interaction capture and analysis
24. What is the main goal of enabling efficient collaboration in digital space?
 - a) To create a digital environment where team members can easily share ideas, provide feedback and work together on projects in real time.
 - b) To develop a project management software for team members
 - c) To train team members on how to use design collaboration software
 - d) To implement video conferencing tools for remote team members
25. What is the purpose of user testing?
 - a) To gather feedback and identify areas for improvement in a product or service
 - b) To create a user-centered design
 - c) To create empathy map
 - d) To conduct user research
26. Which one of the following is not a part of various business process model steps?
 - a) Process maps
 - b) Process detection
 - c) Process imitation
 - d) Process termination

27. An employer Mrs. ABC divides her business processes into basic components based on their functions and performance for the business is called:
 - a) Building Product Management
 - b) Business Product Management
 - c) Business Process Modelling
 - d) Basic Product Management
28. What is the main focus of design thinking in IT?
 - a) Efficiency
 - b) Cost effectiveness
 - c) User-centeredness
 - d) Innovation
29. Which stage in Design Thinking Process allows for the collaboration between designers, developers and stakeholders?
 - a) Empathize
 - b) Define
 - c) Ideate
 - d) Test
30. Which one of the following are advantages of Business Process Modeling?
 - a) Align operations with business strategy
 - b) Improves process communication
 - c) Improves operational efficiencies
 - d) All of these
31. How can Design Thinking in IT improve product services and processes?
 - a) By identifying user needs and pain points
 - b) By considering different perspectives
 - c) By rapid prototyping and testing
 - d) All of these
32. Which one of the following is part of Agile Virtual collaboration approach?
 - a) Allow openness
 - b) Establish a culture of continuous communication
 - c) Develop a culture of courage and flexibility
 - d) All of these
33. What is the main benefit of using a design?
 - a) Efficiency
 - b) Cost-effectiveness
 - c) Improved user satisfaction
 - d) Innovation
34. Business process modeling replaced the organization's previous effective packages
 - a) Time and motion study
 - b) Total quality management
 - c) a and b
 - d) None of these
35. Which method can be used to design complex software programs based on models, both structural and behavioural models?
 - a) Scenario based prototype
 - b) Agile discussion
 - c) Simple prototype
 - d) None of these
36. For a website development project in an industry, the software developers divide the main project into many smaller projects and adopt an iterative approach to incorporate any changes needed as per frequent customer feedback. This type of approach is found in
 - a) Agile method
 - b) Waterfall method
 - c) Sprints
 - d) All of these

37. A time boxed iteration of continuous development cycle for a planned amount of work that has to be completed by the team and made ready for review is called
 - a) Prototyping
 - b) Sprint
 - c) Experience Design
 - d) Business Model Design
38. Which one is the process of setting goals, procedures and objectives in order to make a company or organization more competitive?
 - a) Visualization
 - b) Strategic management
 - c) Group discussion
 - d) Prototype
39. Which one of the following is not part of any type of innovation?
 - a) Disruptive
 - b) Radical
 - c) Conceptual
 - d) Architectural
40. Which innovation type is related to new concept, product or service which will create new value to the existing market and also create a completely new market?
 - a) Incremental
 - b) Sustaining
 - c) Disruptive
 - d) Radical
41. Duration of design thinking workshop can be
 - a) 2 hrs
 - b) 2 days
 - c) one week
 - d) Depends on the context of the workshop
42. Which one of the following are part of the scope of strategic innovation?
 - a) Managed innovation process
 - b) Strategic Alignment
 - c) Industries foresight and implementation
 - d) All of these
43. 'The willingness to try something by building, it is the evidence of experimentation'. The statement refers to
 - a) Story telling
 - b) Prototyping
 - c) Mind mapping
 - d) Conceptualizing
44. How does experience design relate to humanization in product development?
 - a) Experience design focuses on creating a positive user experience while, humanization focuses on making products more user friendly.
 - b) Experience design and humanization are unrelated.
 - c) Experience design and humanization focuses on creating a positive user experience
 - d) None of these
45. Which one is not part of planning stage of design thinking workshop?
 - a) Learning goals
 - b) Pre-meeting
 - c) Developing flow of activity
 - d) Idea testing

46. _____ innovation happens when a new technology completely disrupts existing business or economy and creates a new business model.
- a) Incremental
 - b) Sustaining
 - c) Disruptive
 - d) Radical
47. Which of the following is not consideration while representing the story of the product?
- a) The central idea of the product
 - b) Engaging the participants
 - c) Other products in market
 - d) Incorporate adequate detail
48. A company collects, analyses and rework by considering negative feedback to learn and improve to create a solution that is
- a) Desirable to customer
 - b) Feasible to implement
 - c) Viable for long term success
 - d) All of these
49. What step of the design process was not considered for this tea pot?



- a) Research and Design
 - b) Prototype and Testing
 - c) Design and Manufacturing
 - d) All of these
50. Mr. XYZ is starting a clothing company. Instead of making clothing that fits models, he wants to start thinking about what non models/common people/end users need and plan his design around them. Accordingly, he is engaging in
- a) Design thinking
 - b) Model design
 - c) End user generation
 - d) Model thinking
