MS – 205

II Semester B.Sc. Examination, May 2011
(Semester Scheme)
PHYSICS – II
Properties of Matter, Heat and Thermodynamics

Time : 3 Hours Max. Marks : 60

PART – A

Answer **any five** questions. **Each** question carries **six** marks. **(5×6=30)**

1. a) What is internal bending moment ?

   b) Deduce an expression for the depression at the loaded end of a single cantilever. **(1+5)**

2. Derive Poiseuille's formula for the flow of viscous fluid through a horizontal capillary tube of length L and radius r. **6**

3. a) What is angle of contact ? Explain.

   b) Obtain an expression for the pressure difference across a curved liquid surface. **(2+4)**

4. Derive an expression for thermal conductivity of a gas on the basis of kinetic theory of gases. **6**

5. a) State and explain zeroth law of thermodynamics.

   b) Obtain an expression for the work done in an isothermal process. **(2+4)**

6. With the help of a diagram obtain an expression for the efficiency of a Carnot's engine. **6**

7. a) Define Helmholtz and Gibb's free energy.

   b) Using Maxwell's thermodynamic relation obtain an expression for the difference in specific heats for a Van der Waal gas. **(2+4)**

8. Discuss the results of the Joule – Thomson experiment. Distinguish between Joule – Thomson effect and adiabatic expansion. **(2+4)**

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PART – B

Solve **any four** problems. **Each** problem carries **five** marks. **(4×5=20)**

9. An aluminium rod of length 10 m and area of cross section 1 sq.cm is compressed by a longitudinal load of 10 kg. Find the energy stored in the rod.
   Given : Young's modulus of aluminium = 7×10^{10} N/m^2

10. A spherical ball of radius 2.2×10^{-3} m and mass 1.4×10^{-4} kg takes 6.4 s to fall steadily through a height of 0.32 m inside a large volume of oil of density 900 kg m^{-3}. Calculate the coefficient of viscosity of the oil.

11. Calculate the diameter of a capillary tube in which water rises to a height of 15 cm. Given : Surface tension of water = 70×10^{-3} Nm^{-1}, angle of contact = 0°, density of water = 10^3 kg m^{-3} and g = 9.8 m/s^2.

12. Dry air at normal pressure and 27 °C is compressed to 1/3rd of its original volume under adiabatic conditions. Determine the resultant pressure. Given : $\gamma = 1.4$.

13. Calculate the elevation of the boiling point of water due to a change of pressure of 1 cm mercury. Assume L = 2.268×10^6 J kg^{-1} and specific volume of steam = 1.671 m^3.

14. Calculate the change of entropy when 0.02 kg of ice at 0 °C is converted to steam at 100 °C.
   Given : Specific latent heat of ice = 3.36×10^5 J kg^{-1}, specific latent heat of steam = 2.27×10^6 J kg^{-1} and specific heat capacity of water = 4200 J kg^{-1}K^{-1}.

PART – C

15. Answer **any five** of the following. **Each** question carries **two** marks. **(5×2=10)**
   a) Which is more elastic – steel or rubber ?
   b) Explain why a parachute is invariably used while jumping from an aeroplane.
   c) Why does hot soup taste better than cold soup ?
   d) What is the basic difference between an ideal gas and a real gas ?
   e) Why is c_p greater than c_v ?
   f) Why does rubber band become hot when stretched adiabatically ?
   g) What is meant by adiabatic demagnetization ?
   h) How will the rise of a liquid be affected if the top of the capillary tube is closed ?

MS – 209

II Semester B.Sc. Examination, May 2011
(Semester Scheme)
Paper – II : CHEMISTRY

Time : 3 Hours Max. Marks : 60

Instructions : *1) The question paper has* ***two*** *Parts. Answer* ***both*** *the Parts.*
2) Write the equations ***wherever*** *necessary.*

PART – A

Answer **any six** of the following questions. **Each** question carries **two** marks. **(2×6=12)**

1. Mention the type of hybridisation in the following $BeCl_2$, SF_6, PCl_5 and H_2O.
2. Calculate bond order in O_2^-.
3. Compare the dipole moments of Cis and trans isomers of $C_2H_2Cl_2$ molecule.
4. Write two applications of Neon.
5. How is diborane prepared from boron trioxide ?
6. Mention the electrophiles in nitration and sulphonation of benzene.
7. Define Huckel's rule with an example.
8. Explain Saytzeff's rule with an example.
9. State First law of Thermodynamics.
10. Classify the following in to partially miscible, completely miscible and immiscible pairs.
    i) Aniline-Water
    ii) Ethanol-Water
    iii) Water-Nicotine

P.T.O.

PART – B

Answer **any eight** of the following questions. **Each** question carries **six** marks. **(6×8=48)**

11. a) On the basis of VSEPR Theory explain the shape of NH_3 molecule.

    b) Write any two properties of ionic compounds. **(4+2)**

12. a) How is Lattice energy of NaCl determined, using Born-Haber cycle ?

    b) What are intrinsic semiconductors ? Give one example. **(4+2)**

13. a) How is Xenon hexa fluoride prepared ? Explain its structure.

    b) Draw the molecular orbital diagram of N_2 molecule. **(4+2)**

14. a) Explain the structure of diborane.

    b) What is the effect of heat on hydrazine ? Give reaction. **(4+2)**

15. a) What is the action of water on thionyl chloride ?

    b) Mention the geometry of ClF_3 and SO_2Cl_2.

    c) Give two examples each for ortho and meta directing groups. **(2+2+2)**

16. a) How are silicates classified based on structures ?

    b) Write the auto ionisation of liquid NH_3. What is an acid and base in liquid ammonia ? **(3+3)**

17. a) Explain the orientation effect of – OH group in phenol.

    b) How is anthracene converted to anthraquinone ? **(4+2)**

18. a) Explain the mechanism of sulphonation of benzene.

    b) Arrange the following compounds in the decreasing order of reactivity.

    i) Benzene ii) Toluene iii) Nitro benzene. **(4+2)**

19. a) Explain the mechanism of S_N^2 reaction.

    b) What is meant by thermodynamic equilibrium ? **(4+2)**

20. a) Define an isolated system.

    b) Enthalpy of a reaction is found to be –92.2 kJ at 298 k. What is the enthalpy of this reaction at 348 k ($\Delta Cp = -1.97 \times 10^{-3}$ kJ) ? **(2+4)**

21. a) Describe steam distillation. How it is employed in calculating the molecular mass of organic liquid ?

    b) Write two applications of Nernst distribution law. **(4+2)**

22. a) What are azeotropic mixtures ? Explain the principle of fractional distillation.

    b) Classify the following in to extensive and intensive properties.
    i) Mass ii) Density iii) Volume iv) Temp. **(4+2)**

MS – 217

Second Semester B.Sc./B.A. Examination, May 2011
(Semester Scheme)
MATHEMATICS (Paper – II)

Time : 3 Hours | Max. Marks : 90

Instruction: *Answer* ***all*** *questions.*

I. Answer **any fifteen** of the following : **(15×2=30)**

1) Find the rank of the matrix, $A = \begin{bmatrix} 1 & 1 & -1 \\ 2 & -3 & 4 \\ 3 & -2 & 3 \end{bmatrix}$

2) Find the value of k if the matrix $\begin{bmatrix} 1 & 2 & 1 \\ -1 & -3 & -1 \\ k & 0 & 1 \end{bmatrix}$ is of rank 2.

3) Find the values of λ for which the system has a non-trivial solution.

$2x - y + 2z = 0$

$3x + y - z = 0$

$\lambda x - 2y + z = 0$

4) If A is a square matrix then prove that A and A' will have the same eigen values.

5) Find A^2 using Cayley Hamilton theorem where $A = \begin{bmatrix} 1 & 2 \\ 1 & 3 \end{bmatrix}$.

P.T.O.

6) Find the length of polar subtanget to the curve $r = a(1 + \cos\theta)$ at $\theta = \frac{\pi}{3}$.

7) Find $\frac{ds}{dx}$ for the curve $y^2 = 4ax$.

8) Find the angle between the radius vector and the tangent to the curve $r = ae^{\theta \cot \alpha}$.

9) Write the formula for the radius of curvature at any point on a curve in Cartesian form.

10) Find the tangents at the origin to the curve $x^3 + y^3 = 3axy$.

11) Find the envelope of the family of curves $y = mx + \frac{3}{2m}$, where m being the parameter.

12) Find the asymptotes parallel to the coordinate axes for the curve $x^2y^2 - y^2 = 2$.

13) Show that $y = \log x$ is everywhere concave downwards.

14) For the curve $y = a \log \sec\left(\frac{x}{a}\right)$ show that $\frac{ds}{dx} = \sec\left(\frac{x}{a}\right)$.

15) Find the volume generated by rotating a parabola $y^2 = 4ax$ lying between its vertex and latus rectum about x-axis.

16) Solve $\frac{dy}{dx} = (x + y)^2$.

17) Find the integrating factor of $(1 + x^2)\frac{dy}{dx} + y = \tan^{-1} x$.

18) Verify for exactness $(4x + 3y + 1)\,dx + (3x + 2y + 1)\,dy = 0$.

19) Solve $P^2 - 3P + 2 = 0$, where $P = \frac{dy}{dx}$.

20) Find the orthogonal trajectory of $r\theta = a$.

II. Answer **any three** of the following : **(3×5=15)**

1) Reduce the matrix A to its normal form and find the rank of A where

$$A = \begin{bmatrix} 1 & 1 & 1 & 2 \\ 2 & 1 & -3 & -6 \\ 3 & -3 & 1 & 2 \end{bmatrix}.$$

2) Verify whether the following system of equations for consistency and if consistent solve :

$x + y + z = 6$

$x + 2y + 3z = 14$

$x + 4y + 7z = 30.$

3) Using elementary transformations find the inverse of the matrix

$$A = \begin{bmatrix} 1 & 2 & -1 \\ -1 & 1 & 2 \\ 2 & -1 & 1 \end{bmatrix}.$$

4) Find the eigen values and eigen vectors of the matrix $A = \begin{bmatrix} 2 & -1 \\ 0 & 1 \end{bmatrix}$.

5) If $A = \begin{bmatrix} 1 & 0 & -1 \\ 1 & 2 & 1 \\ 2 & 2 & 3 \end{bmatrix}$, find A^{-1} using Cayley Hamilton theorem.

III. Answer **any two** of the following : **(2×5=10)**

1) Show that the curves $r = a \sec^2\left(\frac{\theta}{2}\right)$ and $r = b \operatorname{cose} c^2\left(\frac{\theta}{2}\right)$ intersect orthogonally.

2) Find the Pedal equation of $x^2 + y^2 = 2ax$.

3) Find the radius of curvature of the curves $x = a\cos^3 t$, $y = a\sin^3 t$.

4) Find the evolute of an ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$.

IV. Answer **any two** of the following : **(2×5=10)**

1) Find all the asymptotes of the curve $x^3 + 2x^2y + xy^2 - x^2 - xy + 2 = 0$

2) Find the position and nature of the double points of the curve $y^2 = x^2(x-1)$.

3) Find the envelope of the family of lines $x\cos^3\theta + y\sin^3\theta = a$, where θ is a parameter.

4) Trace the curve Astroid $x^{\frac{2}{3}} + y^{\frac{2}{3}} = a^{\frac{2}{3}}$, $(a > 0)$

V. Answer **any two** of the following : **(2×5=10)**

1) Find the area of the Cardioid $r = a(1 + \cos\theta)$

2) Find the surface area generated by revolving the arc of the Catenary $y = c\cosh\left(\frac{x}{c}\right)$ from $x = 0$ to $x = c$ about x-axis.

3) Find the length of the arc of the curve $x = e^{\theta}\sin\theta$, $y = e^{\theta}\cos\theta$ from $\theta = 0$ to $\theta = \frac{\pi}{2}$.

VI. Answer **any three** of the following : **(3×5=15)**

1) Solve $\frac{dy}{dx} = \sin(x + y)$

2) Solve $\frac{dy}{dx} = \frac{y}{x} + \sin\left(\frac{y}{x}\right)$

3) Solve $\frac{dy}{dx} - y\tan x = -y^2\sec x$.

4) Find the orthogonal trajectories of the family of parabolas $y^2 = 4ax$, where a is a parameter and name them.

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MS – 253

II Semester B.A./B.Sc. Examination, May 2011
(Semester Scheme)
COMPUTER SCIENCE – II
Data Structures and Operating Systems

Time : 3 Hours Max. Marks : 60

Instruction: *Answer* ***all*** *the Sections.*

SECTION – A

Answer **any ten** questions. **(10×1=10)**

1. What are primitive data structures ?
2. Name the character used to terminate a string.
3. What is meant by traversing a linked list ?
4. What are the operations performed on a stack ?
5. Write any two merits of array over linked list.
6. What does vertex and edge represent in a graph ?
7. Write any two applications of trees.
8. What is turn around time ?
9. Mention any one page replacement algorithm.
10. What is the difference between long-term scheduler and short-term scheduler ?
11. Define Spooling.
12. Mention any two attributes of a file.

P.T.O.

SECTION – B

Answer **any five** questions. **(5×3=15)**

13. Explain the process of extracting a sub -string from a given string.

14. Write a C function to insert a node at the beginning of the linked list.

15. Explain Tower of Hanoi problem with 2 disks.

16. Define the terms.
    a) walk
    b) degree
    c) connected graph.

17. Write a short note on single-user operating system.

18. Write the activities of each states of a process.

19. Mention the different operations performed on files.

SECTION – C

Answer **any five** questions. **(5×7=35)**

20. a) Mention any two goals of data structure. **2**
    b) Write an algorithm to **5**
    1) Insert an item into k^{th} position of an array.
    2) Delete an item from the k^{th} position of an array.

21. Write a C program to implement queues using pointers.

22. a) What does an availability list represent ? Write a C function to create a node from the available list. **5**
    b) What is a circular linked list ? **2**

23. a) Convert the following infix expression to postfix and prefix. **4**

    ((A + B) * C – (D – E)) ^ (X + Y).

    b) What is recursion ? Give any two advantages of it. **3**

24. a) What are Double-ended Queues ? Explain with diagram. **4**

    b) What are the advantages of doubly linked list over singly linked list ? **3**

25. a) What are parallel systems ? **3**

    b) Explain the concept of virtual machines. **4**

26. What sort of information is stored in a process control block ? Explain with a diagram.

27. a) Mention the various memory management functions. **4**

    b) Write the difference between paging and segmentation. **3**

MS – 245

II Semester B.Sc. Examination, May 2011
(NS)
ELECTRONICS – II
Basic Electronics – II

Time : 3 Hours | Max. Marks : 60

Instruction : *Answer* ***any five*** *questions from Part – A,* ***any four*** *from Part –* ***B*** *and* ***any five*** *from Part –* ***C.***

PART – A

Answer **any five** questions : **(5×6=30)**

1. Explain the working of JFET amplifier and derive the expression for its voltage gain. **6**

2. Explain the construction and working of unijunction transistor (UJT). Draw its V-I characteristics. **6**

3. a) Explain the classification of power amplifiers based on the position of Q-point.
   b) Draw the frequency response curve of a double tuned voltage amplifier. **4+2**

4. a) Derive the expressions for I_C and V_{CE} of a dual input balanced output differential amplifier.
   b) Mention any four characteristics of an ideal operational amplifier. **4+2**

5. a) Derive an expression for voltage gain of an amplifier with negative feed back.
   b) Mention the effects of negative feed back on :
      i) bandwidth
      ii) input impedance of an amplifier. **4+2**

6. With the help of a circuit diagram, derive an expression for the voltage gain of a first order high pass filter. Draw its frequency response curve. **6**

7. Explain the construction and working of a Wein-bridge oscillator. Write the expression for its frequency of oscillations. **6**

P.T.O.

8. Explain the working of an astable multivibrator with a circuit diagram. Write the expression for its frequency. Sketch the output waveform. **6**

PART – B

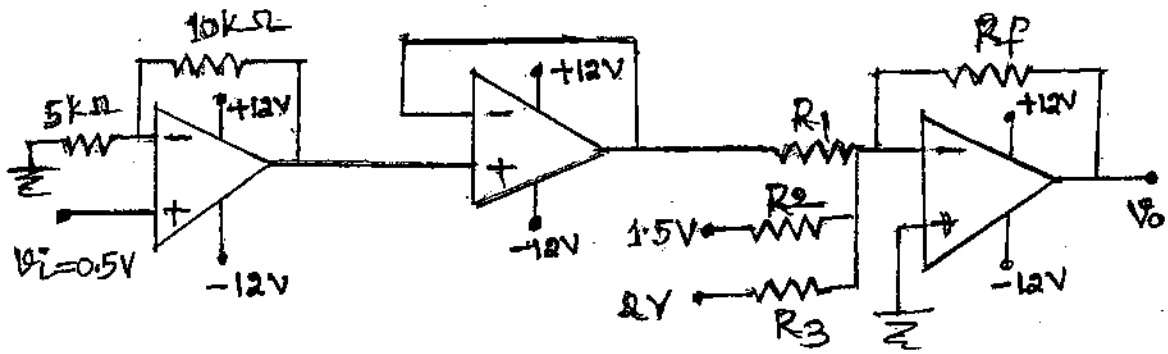
Answer **any four** questions : **(4×5=20)**

9. A half wave rectifier circuit employing an SCR is adjusted to have current of 1 mA. The forward breakover voltage of SCR is 100 V. If the sinusoidal voltage of 200 V peak is applied and $R_L = 1k\Omega$, find
   i) Firing angle
   ii) Conduction angle
   iii) I_{avg}. **5**

10. a) Calculate CMRR in dB for the operational amplifier circuit of
   $v_d = 1$ mV, $v_o = 120$ mV ;
   $v_c = 1$ mV, $v_o = 20$ μV .
   b) The output voltage of certain operational amplifier changes by 20 V in 4 μs . What is its slew rate ? **3+2**

11. A basic amplifier produces an output of 2 V when the input of 5 mV is applied. If the feed back ratio is 0.05, find
   i) Open loop gain
   ii) Closed loop gain
   iii) Feed back voltage. **5**

12. Find the output voltage for the operational amplifier circuit shown below : **5**



Take $R_1 = R_f$; $R_2 = R_{f/2}$; $R_3 = R_{f/3}$

13. The frequency of oscillations generated in a Hartley oscillator is 100 kHz. The feedback factor in the oscillatory network is 0.1, find the values of inductors used if C = 10 pF. 5

14. A crystal oscillator has the following parameters :

L = 0.33 H, C = 0.06 pF, C_M = 1 pF and R = 5.5 kΩ

Calculate :

i) Series resonance frequency

ii) Parallel resonance frequency

iii) Q of the crystal. 5

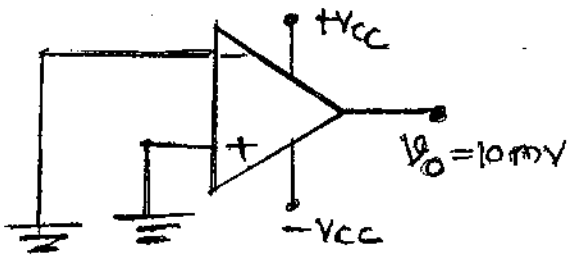
PART – C

Answer **any five** sub-divisions. **(5×2=10)**

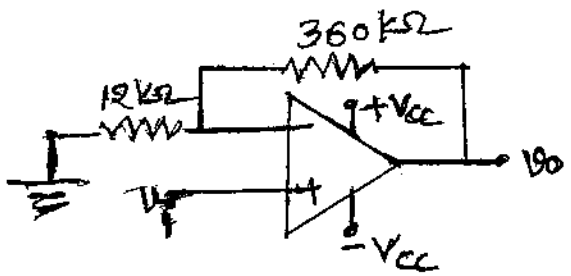
15. a) Mention the distinguishing features of a MOSFET over a JFET. 2

b) What are the remedies to overcome cross-over distortion in class B push pull amplifier ? 2

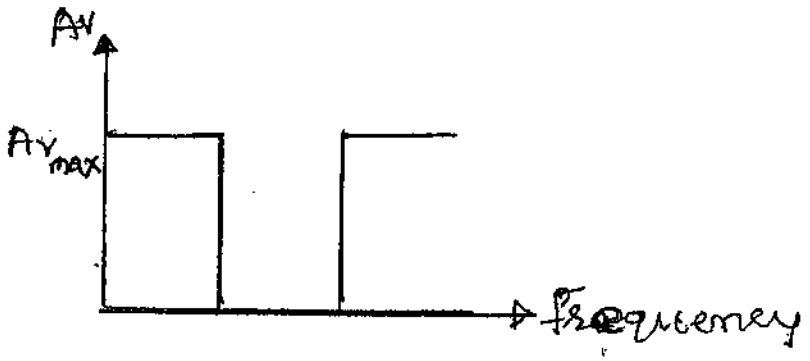
c) The circuit below shows the output as 10 mV for the ideal op-amp. Why ? How can it be made to zero ? 2



d) What output voltage results in the following circuit for an input voltage $v_i = -0.3$ V ? 2

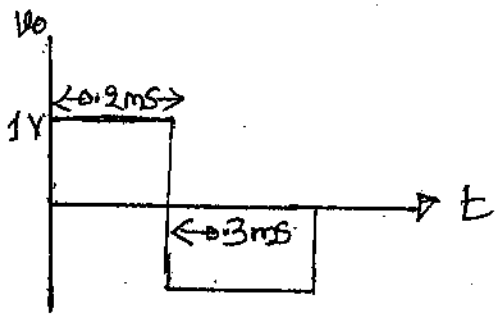


e) The frequency response curve of a circuit is shown below. Identify the circuit. Is it possible to obtain such a response practically ? 2



f) Practical LC tank circuit alone once excited does not produce sustained oscillations. Give reasons. 2

g) The output of an astable multivibrator is shown below. Calculate its frequency and duty cycle. 2



MS – 002

II Sem. B.Sc. Examination, May 2011
(Freshers Scheme)
ಕನ್ನಡ ಭಾಷೆ – II
ಸಾಹಿತ್ಯ ಸಮನ್ವಯ – 2 ಮತ್ತು ಚಿರಸ್ಮರಣೆ

ಸಮಯ : 3 ಗಂಟೆಗಳು ಗರಿಷ್ಠಾಂಕಗಳು : 90

I. ಎಲ್ಲಾ ಪ್ರಶ್ನೆಗಳಿಗೂ ಉತ್ತರಿಸಿ : **(1×10=10)**

1) ಎಂತಹ ಚಿತ್ರಿಯ ಮುದುಡಿ ಮೂಲೆಗಿಡು ಎನ್ನುತ್ತಾನೆ ಕವಿ ?
2) ಬೇಸರ ನನಗೆ ಒಂದು ಕತೆ ಹೇಳು ಎಂದು ಯಾರು ಯಾರನ್ನು ಕೇಳಿದರು ?
3) ಚೆಂಬೆಳಕು ಯಾವುದರ ಪ್ರತೀಕ ?
4) ಹನುಮನಿಗೆ ರಾಮನ್ ಹೋದರೆಷ್ಟೊ ಆಷ್ಟೇ ಮತ್ತೊಬ್ಬರು ಹೋದರೂ. ಆ ಮತ್ತೊಬ್ಬರ ಹೆಸರೇನು ?
5) 'ಹಸಿವು' ಪ್ರಬಂಧದ ಲೇಖಕರು ಮಾಧ್ಯಮಿಕ ಶಾಲೆಯಲ್ಲಿದ್ದಾಗ ನೋಡಲು ಹೋಗಿದ್ದ ಸ್ಥಳ ಯಾವುದು ?
6) ಮೊಸರವಲಕ್ಕಿಗೆ ಏನೇನನ್ನು ಸೇರಿಸಬೇಕು ?
7) ಜಿ.ಕೆ. ಅವರ ಪ್ರಕಾರ ಬಹಳ ಮುಖ್ಯವಾದ ಪ್ರಶ್ನೆ ಯಾವುದು ?
8) ಎಲ್ಲಾ ವಾದಕ್ಕಿಂತ ಮೂಲಭೂತವಾದುದು ಯಾವ ವಾದ ?
9) ದಾಂಡಿಗ ಹೇಳಿದ ಮಹತ್ವದ ತತ್ವ ಯಾವುದು ?
10) ಜಾತ್ರೆಯಲ್ಲಿ ಏನನ್ನು ಕೊಡಿಸಲು ಚಿರುಕಂಡ ಅಮ್ಮನನ್ನು ಕೇಳಿದ ?

II. ಯಾವುದಾದರೂ **ಐದಕ್ಕೆ** ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ : **(2×5=10)**

1) ಗೋಪಾಲಕೃಷ್ಣ ಅಡಿಗ
2) ನವೋದಯ ಕಾವ್ಯ
3) ಪತ್ರಿಕೆಯ ಹುಡುಗ ತಂದ ಸುದ್ದಿ
4) ಲಲಿತೆ
5) ಸುನಂದ ಬೆಳಗಾಂವಕರ
6) ವಿಚಾರ ಸಾಹಿತ್ಯ
7) ತೇಜಸ್ವಿನಿ ನದಿ
8) ಕುಳಕುಂದ ಶಿವರಾಯ.

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III. ಯಾವುದಾದರೂ **ಒಂದು** ಕಾವ್ಯ ಭಾಗವನ್ನು ವಿಶ್ಲೇಷಿಸಿ : **(1×6=6)**

1) ಬೊಗಸೆಗಂಗಳ ತೆರೆದು ಮೊಗೆ ಮೊಗೆದು ಕುಡಿದರೂ
ಈ ಪುರಾತನ ದಾಹ ತೀರದಲ್ಲಾ !
ಏನೋ ಅಸಮಧಾನ ಹೃದಯಾಂತರಾಳದಲಿ
ಬಾಯ್ದೆರೆದು ಹೀರುತಿದೆ ತೃಪ್ತಿಯಿಲ್ಲ.

2) ನೆರೆಯವನೊಡನೆ ದಿನವಹಿ ಕಾದಾಟ ಸಾಕಾಗಿದೆ ಮಾರಾಯರೇ ಅಂದ – ಕೊರೆಯುತ್ತಲೇ ಇದ್ದ – ಹೂಂಗುಟ್ಟಿದೆ – ಅವನ ಮಾತಿಗೆ ಮಂಜಿನೊಳಗಿನ ಸೂರ್ಯ ನನ್ನ ಪ್ರಜ್ಞೆ 'ರಾಮನ್ ಸತ್ತರೋ ಹನುಮ' ಅನ್ನಬೇಕು, ಆಗ ತಡೆದು ಸುಮ್ಮನಾದೆ, ರಾಮನ್ ಅರ್ಥೈಸಿಕೊಳ್ಳಬಹುದೆ ಇವನ ಅಶಿಕ್ಷಿತ ಅರಿವಿಗೆ ?

IV. ಯಾವುದಾದರೂ **ಆರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ : **(4×6=24)**

1) 'ತೆರೆದ ಬಾಗಿಲು' ಕವಿತೆಯ ನಿರೂಪಣಾ ವಿಶೇಷತೆಯೇನು ?
2) 'ಏನಾದರೂ ಮಾಡುತಿರು ತಮ್ಮ' ಕವಿತೆಯ ಆಶಯವೇನು ?
3) ಪಿನೋಕಿಯೋದಲ್ಲಿ ಬರುವ ಕತೆ ಯಾವುದು ?
4) ಅತ್ತೆ ಮತ್ತು ಮಾವನವರಲ್ಲಿದ್ದ ಪರಸ್ಪರ ವ್ಯತ್ಯಾಸಗಳಾವುವು ?
5) ಟ್ರಿಸ್ಟಾನ ಎಂಬ ದ್ವೀಪದ ಕತೆ ಯಾವುದು ?
6) ನಾವೆಲ್ಲ ದೊಡ್ಡವರಾದಾಗ ನಮ್ಮ ಗತಿ ಏನಾಗುತ್ತದೆ ಎಂದು ಜಿ.ಕೆ. ಹೇಳುತ್ತಾರೆ ?
7) ಚಿರುಕಂಡ ಮೊದಲ ಬಾರಿಗೆ ಜಮೀನ್ದಾರನ ಮನೆಯ ಮುಂದೆ ಕಂಡ ದೃಶ್ಯವೇನು ?
8) ಕಣ್ಣ ಯಾರು ? ಅವನ ಅಳುವಿಗೆ ಕಾರಣವೇನು ?

V. ವಿಶ್ಲೇಷಣಾತ್ಮಕ ಉತ್ತರ ಬರೆಯಿರಿ : **(10×4=40)**

1) 'ಗೊಬ್ಬರ' ಕವಿತೆ ಪ್ರಶ್ನಿಸುತ್ತಲೆ ಏನನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತದೆ ? ವಿವರಿಸಿ.

ಅಥವಾ

'ಏಳು ಸುತ್ತಿನ ಕೋಟೆ' ಪದ್ಯದ ಸಾಂಕೇತಿಕತೆಯ ಮಹತ್ವವನ್ನು ಕುರಿತು ಬರೆಯಿರಿ.

2) ಅಡುಗೆ–ಸಾಹಿತ್ಯ–ರುಚಿ ಇವುಗಳ ಸಂಬಂಧಾಂತರಗಳು 'ಹಸಿವು' ಪ್ರಬಂಧದಲ್ಲಿ ಹೇಗೆ ಚರ್ಚೆಯಾಗಿವೆ ? ವಿವರಿಸಿ.

ಅಥವಾ

'ಮೊಸರವಲಕ್ಕಿ' ರುಚಿಯೊಳಗೆ ಹುದುಗಿದ ಮಧುರಸ್ಮೃತಿಗಳಾವುವು ?

3) 'ಶಿಕ್ಷಣ'ವನ್ನು ಕುರಿತ ಜಿ.ಕೆ. ಅವರ ಚಿಂತನೆಗಳನ್ನು ಚರ್ಚಿಸಿ.

ಅಥವಾ

ರಾಷ್ಟ್ರೀಯತೆಯನ್ನು ಕುರಿತಂತೆ ಡಿ.ಆರ್.ನಾಗರಾಜ್ ಯಾವ ಯಾವ ಪರಿಕಲ್ಪನೆಗಳನ್ನು ಚರ್ಚಿಸಿದ್ದಾರೆ ? ವಿವರಿಸಿ.

4) ಚಿರುಕಂಡ–ಅಪ್ಪು–ಮಾಸ್ತರು ಈ ಮೂವರ ಸಂಬಂಧದ ಮಹತ್ವವೇನು ? ಚರ್ಚಿಸಿ.

ಅಥವಾ

ಕಯ್ಯೂರಿನ ವೀರಗಾಥೆ ಯಾವುದು ? ಸಂಗ್ರಹವಾಗಿ ನಿರೂಪಿಸಿ.

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MS – 018

II Semester B.Sc./B.C.A./B.Sc.(FAD) Examination, May 2011

(Semester Scheme)

(Fresh) (2011 and Onwards)

LANGUAGE ENGLISH – II (Part A and Part B)

Time : 3 Hours Max. Marks : 90

***Instruction** : Answer **all** questions. Mention the question numbers **correctly**.*

PART – A

Experience (Literary Component)

I. Answer **any seven** questions in **1** or **2** sentences : **(7×2=14)**

1) At what time does the bomb explode in the poem *The Terrorist, He Watches* ?

2) The city of Bombay, in *Sea Breeze, Bombay,* gives shelter to refugees. (True/False)

3) In *Our Town,* what does Pakkiri's mother do for a living ?

4) What does 'ahimsa', in its positive form mean ?

5) Mention the two activities that the author of *Starting from Mile Zero* concentrates on.

6) Why did the writer have to give up his favourite walk in *Beast Tales from Burma* ?

7) At the age of 33, why did Pele feel like retiring ?

8) What was Prafulla's greatest ambition ?

9) Why did the young Pamuk always show his drawings to his father first ?

II. Answer **any four** in about **80-100** words/a page **each** : **(4×5=20)**

1) Describe the people who move in and out of the building where the bomb has been planted.

2) How does Pakkiri's father die in the lesson *Our Town* ?

P.T.O.

3) What is the "three-pronged" problem that the writer talks about in *Starting from Mile Zero* ?

4) How did the travelling salesman help Pele and his friends to enter the big tournament ?

5) In *Audition,* how was Prafulla unlike the other boys of his age ?

6) How did Pamuk's parents respond when he showed them his drawings ?

III. Answer **any one** in about **200-250** words/**2** pages : **(1×10=10)**

1) Bombay is shown as a city that promotes harmony among people from diverse backgrounds. How does the poem *Sea Breeze, Bombay* bring this out ?

2) Trace the writer's journey from Mile Zero to the Antarctic, with reference to the various destinations she visits.

3) Explain Gandhiji's views on ahimsa.

IV. Rewrite as directed (Vocabulary) : **6**

1) Tick the word that is closest in meaning to the expression given below : **(1×1=1)**

A well developed sense of beauty :

- Aesthetic
- Breathtaking
- Awesome

2) Fill in the blanks choosing the right expressions from those given in brackets : **(1×2=2)**

1) The fire men _____ _____ the fire with water hoses.

2) The guest was forced to _____ _____ with the impolite behaviour of the children.

(put up, put out, put across)

3) Match the phrases in Column A with the correct meanings in Column B : **(1×3=3)**

A	**B**
In a flash	again and again
Scrape together	in an advantageous position
In a good spot	suddenly
	collect with great difficulty

PART – B

(Communication Skills)

V. 1) Change the following into indirect speech :

a) John said to his friend, "I want to buy a car". 1

b) The teacher said, "I am writing a book". 1

2) Change to passive voice :

a) The University announced the First Semester results. 1

b) The college issued the mark cards to the students. 1

3) Rewrite the following in a single sentence using the linker-and :

She attended a special class. She returned home late. 1

4) Frame a suitable Wh question to get the underlined words as answer : 1

My friend gave me this pen.

5) Add a suitable question tag to the following statement :

You will not forget the answers, _____ ? 1

VI. Read the following passage and answer the questions given below :

Tourism is an important activity in modern life. In olden days, tourism as such was not wide spread. Instead, people went on long or short pilgrimages, combining piety and pleasure in the same activity. They walked to places like Thirupathi, Kashi and Rameshwaram and it took years for them to complete a pilgrimage. They faced many hardships on the way. Pilgrims had to walk through thick jungles, sleep in open places and had to starve for many days as they could not get food and clean drinking water.

Often, those who went to far off places like Kashi never returned. They might have met with an accident or fallen ill and died during the pilgrimage. Hence, if people returned home after a long pilgrimage, they held celebrations and thanked God for the safe return.

Today, travelling has become safer and more comfortable. We have many means of transport to go on tours or pilgrimages. Good roads, increase in transport and lodging facilities have made travel pleasurable.

Nowadays people undertake tours mainly for relaxation and pleasure. They visit places of historical importance or natural beauty. They visit waterfalls, beaches or hill stations to get refreshed and relieve their tension. On the other hand, pilgrimage is considered a religious duty. People visit temples to offer prayers or fulfil vows. The difference between a tour and pilgrimage is slowly disappearing and people turn a pilgrimage into a pleasurable tour.

In India, tourism has gained importance in recent years due to several reasons. In olden days only the wealthy people could travel to places of interest. They travelled by horse drawn carriages. But today, with the increase in public transport facilities all sections of the society can afford to travel. Railways, Roadways and Airways link all parts of the country and people can travel with ease and comfort if they plan their tour well in advance. There are many hotels and guest houses which provide food and lodging. Spending power of people too has increased. International tourism is gaining popularity.

Tours are popular because they help us to gather knowledge and experience in an enjoyable manner.

VI. A) 1) What are the two types of travel compared in this passage ? **1**

2) Pick out an expression or a word (a linker) from the passage which indicates contrast. **1**

3) Choose the most suitable answer : **1**

a) The passage explains the problems of tourists.

b) Compares and contrasts a tour with a pilgrimage in olden and modern times.

c) It describes sight seeing.

4) Compared to olden days, it is easy to travel now. (True/False). **1**

5) The passage states that a pilgrimage is better than a tour. (true/false). **1**

6) Mention one difference between a tour and a pilgrimage. **1**

VI. B) 1) Mention two hardships faced by the pilgrims in olden days. **2**

2) Mention two differences between tours in olden days and tours in modern times. **2**

VII. Write a paragraph of about **80-100** words **each** using the hints given below :

a) Write on the negative impact of using cell phones **5**

- Bad for health, radiation from cell phones can cause brain tumour
- Use of cell phones while driving, riding cause accidents
- Use in public places disturbs others
- Excess use affects relationship between parents, children
- Conclude the paragraph

b) Write on the evils of war

Use the hints given in the box below : **5**

Causes sufferings to millions, especially to women and children-destroys life and property-wars do not solve problems-modern nuclear warfare very dangerous-causes permanent harm to men, animals, plant life-avoid wars-settle disputes through dialogues.

VIII. Summarise the following passage. Your summary must have at least **four** main ideas. Give a suitable title to the summary. **5**

India in spite of emergence of large and small industrial cities, remains predominantly agricultural. India is still a land of villages. About 75% of the people of India live in villages. Compared to the past, today, especially after independence, life in Indian villages has certainly improved. Villagers are given loans and subsidies to dig wells, to buy seeds, and for several other agricultural purposes. Villagers are also given aid to start cottage industries and other economically productive enterprises. Many roads have been built to connect villages with towns and cities. The villagers can travel by buses and transport commodities to towns and cities for sale. A large number of villages have been supplied with electricity with the result that they can use electricity for lighting and for running irrigation pumps. Many villages have the facility of postal service within their reach. In all large villages there are post offices. There are schools in villages and the children of the villagers can receive education in those schools. On account of all these improvements which have taken place in villages, today, life in an Indian village is certainly far better than it was during the British rule.

IX. Do as Directed :

1) What enquiries would you make in the following situations ? Write a sentence each :

a) You want to know the bus fare from Bangalore to Mysore. **1**

b) You want to know from the receptionist the working hours of the bank. **1**

2) Read the following telephone conversation and organize the message in the format given : 3

Ram : Good morning, I am Ram from Mysore University. Could I speak with Mr. Gopal ?

Receptionist : Sorry Sir. Mr. Gopal is not available. He is attending a meeting. Would you like to leave a message for him ?

Ram : Yes. Could you please inform him that the meeting scheduled for 20 May 2011, at Mysore University has been postponed to 20th May, same time. Ask him to call me back when free. My contact number is 9999988888

Message for :

Message from :

Information :

Contact No. :

3) When you visited your friend's house he was not available. Leave a message for him asking him to call you as soon as he gets back home as you want to discuss some urgent official matter with him. Your message should be brief and to the point. 3

MS – 065

II Semester B.Sc. Examination, May 2011
(Semester Scheme) (Freshers) (2011 and onwards)
HINDI (Language) – II
Poetry, Grammar and Translation Terminology

Time : 3 Hours | Max. Marks : 90

I. निम्नलिखित शब्दों के उत्तर **एक** शब्द या वाक्य में लिखिए : **(1×10=10)**

1) दिव्य रथ पर आरूढ़ होकर चलनेवाला देवता कौन है ?
2) कबीर के अनुसार सारा जगत् माँगनेवाला है तो दाता कौन हैं ?
3) सिंहिनी कैकेयी परिताप में तपकर किस रूप में बदल जाती है ?
4) 'मील का पत्थर' कविता के रचनाकार कौन हैं ?
5) मजदूरिन किस शहर के पथ पर पत्थर तोड रही थी ?
6) पत्थर पर लिखी हुई जली छायाएँ किसकी साक्षी हैं ?
7) फूलों ने अपने नेत्रों को किससे धो लिया है ?
8) प्यार कहाँ तक पहँच सकता है ?
9) कवि गज़ानन मुक्तिबोध को प्रत्येक वाणी में किसकी पीडा का भ्रम होता है ?
10) पर्वत और वृक्ष के उखड़कर गिर जाने के बाद भी गगन में किसका तान रूकता नहीं है ?

II. अ) किन्हीं **दो** की सन्दर्भसहित व्याख्या कीजिए : **(8×2=16)**

1) जाँचिए, गिरिजापति कासी । जासु भवन अनिमादिक दासी ।
औढर – दानि द्रवत पुनि थोरें । सकत न देखि दीन करजोरें ।
सुख–संपति, मति – संगति सुहाई । सकल सुलभ संकर – सेवकाई ।
गये सरन आरतिकै लीन्हे । निरखि निहाल निमिषमहैं कीन्हे ।
तुलसीदास जाचक जस गावै । बिमल भगति रघुपति की पावै ।।

2) बहुत दिनन मैं प्रीतम आए ।
भाग बड़ें घरि बैठें पाए ।
मंगलचार माँहि मन राखौं । राम रसाँइन रसनाँ चाखौं ।
मंदिर माँहि भया उजियारा । लै सूती अपना पिय प्यारा ।
मैं निरास जौ नौ निधि पाई । हमहिं कहा यहु तुमहिं बडाई ।
कहै कबीर मैं कछू न कीन्हाँ । सहज सुहाग राँम मोहिं दीन्हाँ ।।

P.T.O.

3) अहिभूषण, दूषन – रिपु–सेवक, देव–देव , त्रिपुरारी ।
मोह–निहार – दिवाकर संकर, सरन सोक – भयहारी ।
गिरिजा – मन – मानस – मराल, कासीस , मसान – निवासी ।
तुलसीदास हरि – चरन – कमल – बर, देहु भगति अबिनासी ।।

आ) किन्हीं **दो** की सप्रसंग व्याख्या कीजिए : **(8×2=16)**

1) वे ही हैं सन्मुख जाने पर दिखलाते प्रतिबिम्ब तुम्हारा,
हट जाने पर, धो लेते हैं, अपने जी का चित्रण सारा
मैं गरीब क्या जानूँ उतना , बदल – बदल चमकीला होना ।
मेरे अंक अमिट होत है , बेकाबू है जिनका धोना ।

2) जीवन में आज के
लेखक की कठिनाई यह नहीं कि
कमी है विषयों की
वरन् यह कि आधिक्य उनका ही
उसको सताता है ,
और , वह ठीक चुनाव कर नहीं पाता है ।

3) नाश के भय से कभी
दबता नहीं निर्माण का सुख,
प्रलय की निस्तब्धता से
सृष्टि का नव गान फिर–फिर ।

III. किन्हीं **दो** कवितओं का सार लिखकर उसकी विशेषताओं पर प्रकाश डालिए : **(14×2=28)**

1) फूल ।
2) कैकेयी का परिताप ।
3) हिरोशिमा ।

IV. किन्हीं **दो** प्रश्नों के उत्तर लिखिए : **(5×2=10)**

1) अविकारी शब्द का क्या अर्थ है ? उसके कितने प्रकार हैं ? सोदाहरण उनका नाम लिखिए ।
2) विस्मयादिबोधक किसे कहते हैं ? उसके दो उदाहरण लिखकर वाक्यों में प्रयोग कीजिए ।
3) समास किसे कहते हैं ? सोदाहरण उसके प्रमुख भेदों का उल्लेख कीजिए ।

V. निम्नलिखित शब्दों का हिन्दी में अनुवाद कीजिए : (1×10=10)

1) Circulation

2) Vaccination

3) Astrology

4) Thermometer

5) Memory unit

6) Pollination

7) Womb

8) Microscope

9) Afforestation

10) Resources.