[3818] – 207

S.Y. B.Sc. (Semester – II) Computer Science Examination, 2010
COMPULSORY ENGLISH
(2008 Pattern)

Time : 2 Hours Total. Marks : 40

1. A) Sonam, Jyoti, Aamir and Grace are asked to have a group discussion on "Cellphone Menace". Write the transcript of the discussion in a dialogue form. **5**

   B) You are attending an interview for the post of a software programmer. Write down five questions that would be asked along with their responses. **5**

2. A) Write a paragraph on the given topic : Globalisation. **5**

   B) Rearrange the jumbled sentences below to form a well written paragraph. **5**

      i) It could, on the other hand, simply be the result of taking the patient off all life supporting systems.

      ii) Some doctors may do more readily than killing the patient with the help of a lethal drug.

      iii) Euthanasia is the act of helping a person who is terminally ill to die painlessly.

      iv) The act is an offence in most countries and has been made legal only in places like Holland and Belgium.

      v) Euthanasia may be achieved by administering drugs that would lead to a painless death.

3. A) Correct the following sentences using capital letters/punctuation marks wherever necessary. **5**

      i) You must return to Mumbai on friday.

      ii) The big round stone rolled down the hill.

      iii) She knows oriya Bengali and many other languages.

      iv) How magnificent the everest looks.

      v) She reminded us of Gandhis words.

B) Write a summary note of the passage given below. **5**

A new born baby appears to be sleeping almost all the time. But as it grows up, its pattern of sleep changes. It sleeps less and stays awake longer, playing or crying. By adulthood, the pattern is well established; people sleep eight or nine hours a day. Well, not quite that long, for our sleep habits have changed over the last century or so, and we do not get as much sleep as we ought to.

In the eighteenth and nineteenth centuries, people went to bed early, soon after it was dark. They had nothing to do in the evenings, and their sleep habits were fixed by the alteration of day and night, light and darkness. They wakeup by daybreak and thus, they could get nine hours of sleep on an average.

4. A) Write a brief review of the book you read recently. **5**

B) You are the Principal of your college. You had ordered twenty five PCs for the department of computer-science. The PCs that were sent were not according to the ordered configuration. Write a Fax to 'Infotech Services' asking them to replace the entire stock with correct configuration. **5**

———————

[3818] – 605

S.Y.B.Sc. Computer Science (Semester – II) Examination, 2010
ELC 221 : ELECTRONICS (Paper – I)
Microprocessors
(2004 Pattern)

Time : 2 Hours Max. Marks : 40

Instructions. : *1)* ***All*** *questions are* ***compulsory****.*

2) Figures to the ***right*** *indicate* ***full*** *marks.*

3) ***Neat*** *diagrams must be drawn* ***wherever*** *necessary.*

4) Instruction set of ***pentium Microprocessor*** *is provided on the last page.*

1. Answer the following in **one** or **two** sentences : **(1×10=10)**

a) What is the data bus width of 80286 microprocessor ?

b) What is the memory addressing capacity of pentium microprocessor in real mode ?

c) State any two differences of machine language and assembly language.

d) What is the addressing mode of the following instructions ?

i) MOV AX, DX ii) MOV CX, 0034H

e) Define ‘Interrupt’ in microprocessor based system.

f) What is the type of multi processor system, if the clock is shared by all the processors and co-processor ?

g) What, BIOS stands for, in computer system ?

h) State any two features of pentium-pro microprocessor.

i) Which type of memory is the fastest memory in a computer system ?

j) What is the use of co-processor ?

P.T.O.

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

   a) Explain with neat block diagram, microprocessor based system.

   b) Explain, functions of the following blocks of pentium microprocessor.

      i) Bus Unit

      ii) Floating point Unit

      iii) Instruction cache

   c) Explain the interrupt processing sequence with proper block diagram.

3. Attempt **any two** of the following : **(5×2=10)**

   a) What is the function of following Registers of pentium microprocessor in real mode operation ?

      i) Code segment

      ii) Instruction pointer

      iii) Accumulator

      iv) Source Index

      v) Stack pointer

   b) Write an assembly language program to find the smallest number from an array.

   c) Write an assembly language program to arrange the elements of an array in descending order.

4. Attempt **any one** of the following : **(10×1=10)**

   a) i) Explain with suitable example classification of instructions in instruction set of pentium.

      ii) Explain with block diagram, loosely coupled multiprocessor system.

   b) i) Draw the block diagram of prioritized interrupt circuitry and explain its working.

      ii) Explain the operation of following assembly directives

      1) DB 2) ORG

      3) END 4) EQU

      5) DW

———————

[3818] – 204

S.Y.B.Sc. (Computer Science) (Semester – II) Examination, 2010
MATHEMATICS (Paper – II)
MTC-222 : Operations Research
(New and Old Course)
(2008 and 2004 Pattern)

Time : 2 Hours

Max. Marks : 40

N.B. *: 1)* ***All*** *questions are* ***compulsory****.*
2) Figure to the ***right*** *indicate* ***full*** *marks.*
3) Use of single memory, non-programmable scientific calculator is ***allowed****.*
4) Graph papers will be ***provided*** *on demand.*

1. Attempt **each** of the following : **10**

i) Solve the following assignment problem for minimizing the total time for doing all jobs

		Machine		
		I	**II**	**III**
Jobs	**A**	7	6	5
	B	3	7	3
	C	2	9	7

ii) Find IBFS to the following transportation problem using North-West corner method.

	A	**B**	**C**	**D**	**E**	**Supply**
P	2	11	10	3	7	4
Q	1	4	7	2	1	8
R	3	9	4	8	12	9
Demand	3	3	4	5	6	

P.T.O.

iii) Write dual of the following L.P.P.

Minimize $Z = 10x_1 + 4x_2$

Subject to $5x_1 + 4x_2 \geq 50$

$x_1, x_2 \geq 0.$

iv) Define two person zero sum game.

v) Write standard form of the following L.P.P.

Minimize $Z = 4x_1 + 3x_2$

Subject to $2x_1 + x_2 \geq 10$

$-3x_1 + 2x_2 \leq 6$

$x_1, x_2 \geq 0.$

vi) Find λ such that the following game has saddle point

		Player B		
		$\mathbf{B_1}$	$\mathbf{B_2}$	$\mathbf{B_3}$
Player A	$\mathbf{A_1}$	λ	6	2
	$\mathbf{A_2}$	–1	λ	–7
	$\mathbf{A_3}$	–2	4	λ

vii) Define : Basic feasible solution of transportation problem.

viii) Find the feasible region for the following L.P.P. graphically

$x + y \leq 10$

$2x + y = 4$

$x, y \geq 0.$

ix) Solve the following assignment problem

	I	**II**	**III**
A	2	–	2
B	–	2	4
C	5	6	2

x) State dominance principle.

2. Attempt **any two** of the following : **10**

i) Solve the assignment problem represented by following matrix to minimize the cost.

	1	2	3	4	5	6
A	9	22	58	11	19	27
B	43	78	72	50	63	48
C	41	28	91	37	45	33
D	74	42	27	49	39	32
E	36	11	57	22	25	18
F	3	56	53	31	17	28

ii) Solve the following 2×4 game by graphical method.

		Player B			
		I	**II**	**III**	**IV**
Player A	**I**	2	1	0	–2
	II	1	0	3	2

iii) A company manufactures two brand of drugs A and B in capsule form. Number of units of three compounds in these capsules are given

Compound	**A**	**B**
X	2	1
Y	5	8
Z	1	6

It is found that 12 units of x, 74 units of y and 24 units of z are required to get relief. Formulate the L.P.P. to find the least number of capsules a patient should take to get a relief.

3. Attempt **any two** of the following : **10**

i) Find IBFS of the following transportation problem by using VAM.

	A	**B**	**C**	**Supply**
X	11	21	16	**14**
Y	7	17	13	**26**
Z	11	23	21	**36**
Demand	**18**	**28**	**25**	

ii) Reduce the following game by dominance principle and solve it.

		Player B			
		I	**II**	**III**	**IV**
Player A	**I**	3	2	4	0
	II	3	4	2	4
	III	4	2	4	0
	IV	0	4	0	8

iii) The given data in the matrix refers to the production. Solve the following assignment problem to maximize the production.

		Machine			
		M_1	**M_2**	**M_3**	**M_4**
Operator	**I**	10	5	7	8
	II	11	4	9	10
	III	8	4	9	7
	IV	7	5	6	4
	V	8	9	7	5

4. Attempt **any one** of the following : **10**

i) Find IBFS of the following transportation problem by Least cost method.

	Destination			
Origin	**D_1**	**D_2**	**D_3**	**Supply**
O_1	8	16	16	**152**
O_2	32	48	32	**164**
O_3	16	32	48	**154**
Demand	**144**	**204**	**82**	

Also find the optimal solution.

ii) Solve the following L.P.P. by using its dual

Maximize $Z = 5x_1 - 2x_2 + 3x_3$

Subject to $2x_1 + 2x_2 - x_3 \geq 2$

$3x_1 - 4x_2 \leq 3$

$x_2 + 3x_3 \leq 5$

$x_1, x_2, x_3 \geq 0$

[3818] – 201

S.Y. B.Sc. (Computer Science) (Semester – II) Examination, 2010
CS-221 : OBJECT ORIENTED CONCEPTS AND PROGRAMMING IN C++
(2008 Pattern) (Paper – I)

Time : 2 Hours Max. Marks : 40

Instructions : *1)* ***All*** *questions are* ***compulsory****.*
2) ***All*** *questions carry* ***equal*** *marks.*

1. Attempt **all** of the following : **(10×1=10)**

   a) State any two applications of OOPS.

   b) What is data abstraction ?

   c) Justify true/false 'Function can not return class objects'.

   d) What is meant by dynamic constructors ?

   e) What is advantage and disadvantage of operator overloading ?

   f) Where can an ambiguity occur in overloading a functions ?

   g) Differentiate between seekg ( ) and seekp ( ) functions.

   h) Why cannot a static member function access a non static member of other class ?

   i) What is an iterator ? Give any two types.

   j) Justify true/false 'the programmer must create cin, cout, cerr, clog object explicitly.

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

   a) What is copy constructor ? Write a program to find factorial of a number using copy constructor.

   b) What is friend function ? What are their implications on information hiding ?

   c) Write a program to overload function 'concat' which will concatinate :

      i) two strings

      ii) string and int.

P.T.O.

3. Attempt **any two** of the following : **(2×5=10)**

   a) Explain the difference between function overloading and overriding.

   b) Write a program which illustrates the concept of runtime polymorphism.

   c) Write a program to declare a class book having data members as title and author. Accept this data for five books and display this accepted data.

4. Attempt **any one** of the following (**A** OR **B**) : **10**

   A) 1) What is class template ? Write a function template for bubble sort.

   2) Write a program to overload the '[ ]' operator in a class to access data within the class by indexing method.

   OR

   B) 1) Explain the any two filestream classes needed for the file manipulation.

   2) Show the general form of try, catch and throw.

   3) Explain the output of following program.

```
# include < iostream.h>
class Base
 {
   public :
      virtual void void fun ( )
       {
          cout << "fun of Base";
       }
   void run ( )
       {
       fun ( ) ;
       }
 } ;
```

```
Class Derived : public Base
  {
    public :
      void fun ( )
        {
          cout << “fun of Derived”;
        }
  } ;
void main ( )
  {
    Derived d;
    d.run ( ) ;
  }
```

4) Explain the output of the following program.

```
# include < iostream.h >
  int top = 3 ;
class base
  {
   protected :
      int top;
```

```
    public :
        base ( )
        {
            top = 2;
            cout << endl << top
        }
    } ;
  class derived : public base
    {
      private :
        int top;
     public :
      derived ( ) : base ( )
        {
          top = 1;
      cout << endl << top;
      cout << endl << base : : top;
      cout << endl << : : top;
    }
} ;
  void main ( )
    {
      derived dl ;
    }
```

[3818] – 203

S.Y. B.Sc. (Computer Science) (Semester – II) Examination, 2010
MATHEMATICS (Paper – I) Computational Geometry
MTC 221 (Old and New)
(2008 and 2004 Pattern)

Time : 2 Hours Max. Marks : 40

Instructions : *1)* ***All*** *questions are* ***compulsory****.*
2) Figures to the ***right*** *indicate* ***full*** *marks.*
3) Use of single-memory, nonprogrammable scientific calculator is ***allowed****.*

1. Attempt **each** of the following : **10**

i) If we apply shearing in x and y directions by –2 and 2 units respectively onto the rectangle of length 20 cm, then it results into the parallelogram of area 1500 cm^2. Find breadth of the rectangle.

ii) What is the transformation produced by the following transformation matrix.

$$[t] = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 2 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

iii) Write the definition of an orthographic projection.

iv) Write the transformation matrix for the perspective projection from the center of projection $Z_C(0, 50,0)$ onto the y = 0 plane.

v) Write the transformation matrix for rotation about Y-axis through an angle 75°.

vi) Suppose we apply scaling in x and y coordinates by factors 2 and 3 respectively onto a line of slope 4. Then determine slope of the resulting line.

vii) Write definition of homogeneous coordinates.

viii) Write the transformation matrix for rotation about the origin through an angle (–25)°.

ix) Consider the line L parallel to Z-axis and passes through the point (6, 4, –2). Write the transformation matrix so that the line L coincides with the Z-axis.

x) Explain the term parallel projection.

P.T.O.

2. Attempt **any two** of the following : **10**

   i) Consider the line with direction ratios (1, 1, 1). Determine the angles of rotations about X-axis and then about Y-axis so that the line coincides with Z-axis.

   ii) Find the concatenated transformation matrix for the following sequence of transformations. First translation in X and Y directions by –5 and 6 units respectively; followed by reflection through Y-axis ; followed by rotation about the origin through an angle 60°.

   iii) Obtain the diametric projection, if a foreshortening factor along Z-direction is $\frac{2}{5}$. (take $\theta > 0, \phi < 0$).

3. Attempt **any two** of the following : **10**

   i) If we apply shearing in x and y directions by 4 and –3 units respectively onto the lines 2x – y = 1 and x + y = 2, then find point of intersection of the resulting points.

   ii) Find the parametric equation of the Bezier curve determined by the control points B_0 (–1, 2), B_1(2, 4) and B_2(4, 1). Find the point on the curve corresponding to the parameter value t = 0.75.

   iii) If the 2×2 transformation matrix transforms the points P and Q to the points P* and Q* respectively, then prove that the same transformation transforms the midpoint of the line segment PQ to the midpoint of the line segment P*Q*.

4. Attempt **any one** of the following : **10**

   i) Define solid body transformation. Derive the condition on a 2×2 transformation matrix $[T] = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$ to be a solid body transformation.

   ii) Generate uniformly spaced 8 distinct points on the ellipse $\frac{x^2}{9} + \frac{y^2}{4} = 1$.

———————

[3818] – 205

S.Y. B.Sc. (Semester – II) Computer Science Examination, 2010
ELC-221 : ELECTRONICS (Paper – I)
Microcontroller and Embedded Systems
(2008 Pattern)

Time : 2 Hours | Max. Marks : 40

Instructions : *1)* ***All*** *questions are* ***compulsory****.*
2) Figures to the ***right*** *indicate* ***full*** *marks.*
3) ***Neat*** *diagrams must be drawn* ***wherever*** *necessary.*

1. Answer the following in **one** or **two** sentences : **(1×10=10)**

   a) Which two registers are used in multiplication and division operation ?

   b) Which port pins does not have dual function ?

   c) What is the content of TMOD register, if timer 1 is used in mode 2 ?

   d) In which modes, timer 1 controls the baud rate ?

   e) What is the function of $\overline{WR}$ pin of ADC 0804 ?

   f) Which bits of IE register are set to enable interrupt INTO ?

   g) Write the instruction to set bit 2 of port 1.

   h) What is the width in number of bits of THO register ?

   i) Name the special function registers (SFRs) which support serial communication.

   j) Define 'Linker'.

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

   a) What is addressing mode ? Explain with suitable example any four addressing modes of 8051 microcontroller.

   b) Write an assembly language program to toggle 8 bits of Port 1.

   c) Write an assembly language program to obtain the time delay of 200 microssecond using mode 2 of timer 1 register, if crystal frequency XTAL = 12 MHz.

P.T.O.

3. Attempt **any two** of the following : **(5×2=10)**

   a) Explain in detail SCON register of 8051 microcontroller.

   b) Explain with the proper block diagram interfacing of LCD (Liquid Crystal Display) with 8051.

   c) What is simulator ? State any four features of a typical simulator.

4. Attempt **any one** of the following : **(10×1=10)**

   a) i) Compare microprocessor and microcontroller.

      ii) Explain with block diagram components of embedded system.

   b) i) Describe the function of following instructions :

      1) MOV R1, A

      2) MVL AB

      3) XRL A, # 32

      4) ACALL 200 H

      5) CPL P 1.0.

      ii) What are different components of embedded in SOC (System On Chip) ? Explain in brief.

———————

[3818] – 206

S.Y. B.Sc. Computer Science (Semester – II) Examination, 2010
ELC – 222 : ELECTRONICS Paper – II
Digital Signal Processing (2008 Pattern)

Time : 2 Hours Max. Marks : 40

Instructions *:1)* ***All*** *questions are* ***compulsory****.*

2) Figures to the ***right*** *indicate* ***full*** *marks.*

3) Neat diagrams must be drawn ***wherever*** *necessary.*

1. Answer the following in **one** or **two** sentences : **(10×1=10)**

a) What are even signals give its example ?

b) Define transfer function.

c) Write basic principle of SONAR.

d) Name the operations performed by barrel Shifter in DSP processor.

e) What is impulse response ?

f) Define Z-transform.

g) What is the basic difference between Van-neumann and Harvard architecture ?

h) What do you mean by conversion time of ADC ?

i) Represent signal x (n) = {2, 3, $\underset{\uparrow}{0}$, –1, –2} graphically.

j) State any two advantages of digital filters.

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

a) State and explain different ways of DT signal presentation with example.

b) If $X(s)=\frac{-3}{s+1}+\frac{1}{s+3}$ find x (t) which is inverse laplase of X (s).

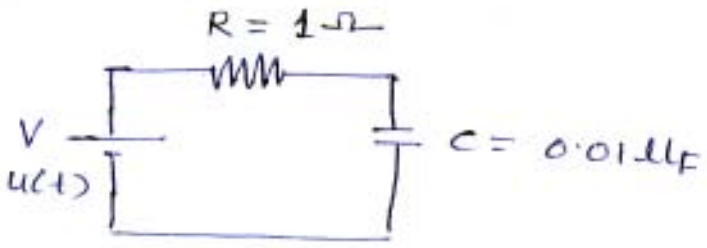
c) Describe technique of interference rejection.

P.T.O.

3. Attempt **any two** of the following : **(2×5=10)**

a) What is correlation ? State and define it's types and list it's any two applications.

b) Find the current i (t) in the given circuit using laplase transform.



c) How DSP processor is different from microprocessor, give any five differences ?

4. Attempt **any one** of the following : **(1×10=10)**

a) I) Explain the concept of CD recording system with the help of block diagram. **5**

II) i) A four point signal x (n) = {1, 2, 2, 1} is passed through a system with a four point impulse response h (n) = {1, 2, 3, –3}. Determine the convolved function Y (n). **3**

ii) Draw the block diagram of basic RADAR system.

OR

b) I) How the samples can be sorted with the help of circular buffering ? Explain. **5**

II) i) Write any three advantages of BLT method in digital filter design. **3**

ii) Give any two DSP processors available in market. **2**

[3818] – 602

S.Y. B.Sc. (Computer Science) (Semester – II) Examination, 2010
COMPUTER SCIENCE (Paper – II) (2004-Pattern)
CS-222 : File Structures and Database Concepts – II

Time : 2 Hours Max. Marks : 40

Instructions.:*1) Figures to the **right** indicates **full** marks.*
*2) **All** questions carry **equal** marks.*
*3) **All** questions are **compulsory**.*

1. Attempt **all** of the following : **(1×10=10)**

   a) Define natural join.

   b) What is partial dependency ?

   c) Write any two advantages of using computer for M/S.

   d) What is CBPIS ?

   e) What is mean by Liability ?

   f) What is ledger?

   g) What is final account ?

   h) Write any two advantages of centralized purchasing.

   i) Define Reorder quantity.

   j) What is material return note ?

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

   a) Consider the following database
   Person (SS_no, name, address)
   Car (lic, year, model)
   Accident (date, driver, damage, amount)
   Owns (SS_no, lic)
   Log (Lic, date, driver)

P.T.O.

Write SQL statement for the following :

1) Find the total number of people whose cars were involved in accident in 2005.
2) Add a new person to the database.
3) Delete the Fiat belonging to “Mahesh”.
4) Count the number of persons form “Pune”.
5) List the number of person who. have “ZEN” model.

b) Consider the following relational database country (con_code, name, capital)

population (pop_code, population)

country and population are related with one-to-one relationship.

Create a RDB for the above and solve following queries.

i) List highest population country.
ii) Give the name and population of country whose capital is “Delhi”.
iii) List countrywise population.

c) What is book keeping ? What are the advantages of book-keeping ?

3. Attempt **any two** : **(2×5=10)**

a) Write a short note on profit and loss account.

b) What is journal ? Discuss process of journalisation.

c) Find 3 NF decomposition of shipping (ship, capacity, date, cargo, value)

FD’s : Ship $\longrightarrow$ capacity

Ship, Date $\longrightarrow$ cargo

Cargo, capacity $\longrightarrow$value.

4. Attempt **any two** : **(2×5=10)**

a) Define the following terms :

i) Bank reconciliation statement
ii) ABC analysis
iii) Trial balance
iv) EOQ
v) Trivial dependencies.

b) Consider following transactions :

1) April – 1 : Sold goods to Mr. X on credit worth Rs. 3,000/-
2) April – 3 : Bought goods form Mr. Y on credit worth Rs. 2,500/-
3) April – 6 : paid Mr. Y Rs. 2,000/- cash on account.
4) April – 7 : Sold goods worth Rs. 4,000/- cash
5) April – 9 : Paid house owner office rent 1,500/-
6) April – 10 : Paid Mr. Z his salary Rs. 750/-
7) April – 13 : Received Rs. 4,000/- as interest on investment.

Prepare journal and ledger for above example.

c) The "center for Advanced Training" offers different courses for the students. Student can select any one course at a time. The batch size of each course is 25 student. Different teachers are alloted to different courses. After successful completion of the course center offers certificate to the students.

1) Draw an E – R diagram presenting above case.
2) Design relational database by identifying suitable constraints.

[3818] – 606

S.Y. B.Sc. (Computer Science) (Semester – II) Examination, 2010
ELC 222 : ELECTRONICS (Paper – II)
Communication Principles (2004 Pattern)

Time : 2 Hours Max. Marks : 40

***Instructions** : 1) **All** questions are **compulsory**.*
*2) Figures to the **right** indicate **full** marks.*
*3) **Neat** diagrams must be drawn **wherever** necessary.*

1. Answer the following in **one** or **two** sentences : **(1×10=10)**

a) What do you mean by MTSO ?

b) "In AM either LSB or USB can be used for transmission". Comment.

c) What is function of "Hybrid" in telephone system ?

d) List two types of facsimile system.

e) In a telephone system _____ is the range of voice signal.

f) What is a guard band ?

g) Mention any two applications of video conferencing.

h) State the types of serial communication.

i) Draw the output waveform for FSK system for the data 10101101.

j) What do you mean by full duplex communication system ?

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

a) Explain the concept of pulse code modulation in detail.

b) List any five advantages of automatic switching system.

c) With a neat block diagram explain video conferencing.

P.T.O.

3. Attempt **any two** of the following : **(2×5=10)**

   a) Explain the 'Grouping' concept in FDM with a suitable diagram.

   b) What is the role of modem ? State any two functions of modem. How are they classified ?

   c) With a neat block diagram explain the fassimile machine.

4. Attempt **any one** of the following : **(1×10=10)**

   a) i) With the help of neat block diagram and phasor diagram explain the working of QPSK modem.

      ii) What is encryption and decryption ? Explain the significance of digital signature.

   b) i) Differentiate between AM and FM.

      ii) Draw the block diagram of communication system and explain functions of each element.

———————

[3818] – 607

S.Y. B.Sc. Computer Science (Semester – II) Examination, 2010
ENGLISH (General) (2004 Pattern)

Time : 2 Hours Max. Marks : 40

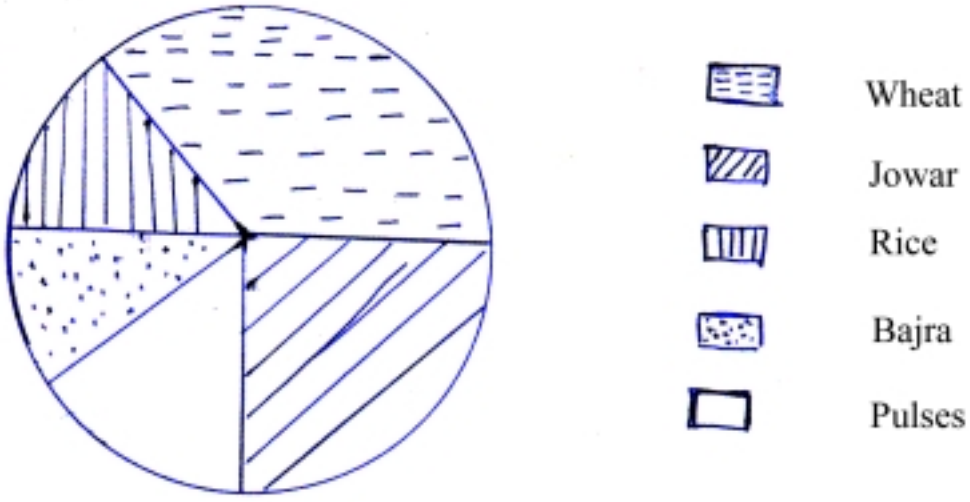
1. A) Write a letter of apology to your teacher for your inability to attend lectures for two weeks. **(5)**

   B) Write a telegram to your friend informing about your arrival in his town for a business meeting. Mention the day, date and mode of conveyance. **(5)**

2. A) You are a journalist. Write a report on the Tsunami hit areas surveyed by you. **(5)**

   B) Write a set of instructions on how to maintain a food processor. **(5)**

3. A) Develop a paragraph on the basis of the diagram given below : Grain production in Maharashtra. **(5)**



   B) Write the minutes for the 'Arts Association' meeting of your college. **(5)**

4. A) Prepare an advertisement for 'save our planet'. **(5)**

   B) Write the process of opening an e-mail account. **(5)**
