JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
I B.Tech. I Mid Examinations, November – 2009
ENGINEERING PHYSICS

Objective Exam

Name: _____ Hall Ticket No. A

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. The atomic packing factor of a simple cubic structure, is [ ]
(a) 68% (b) 74% (c) 52% (d) 24%

2. The crystal planes (1 1 2) and (2 2 4) are [ ]
(a) perpendicular to each other (b) intersecting at an angle other than 90°
(c) parallel to each other (d) intersecting at an angle 45°

3. The Laue spots close to the centre of the Laue photograph correspond to [ ]
(a) high Bragg angles (b) low Bragg angles
(c) lesser interplanar separation of the crystal (d) larger wavelength of X-rays

4. NaCl crystal possess [ ]
(a) FCC structure (b) HPC structure (c) SC structure (d) BCC structure

5. The diffraction of X-rays by crystal planes [ ]
(a) reveals the nature of X-rays
(b) helps to know the characteristics of X-rays
(c) reveals the internal arrangement of atoms in the crystal
(d) helps to know the properties of the crystals

6. Burger's vector gives [ ]
(a) length of Burger's circuit (b) magnitude and direction of dislocation
(c) magnitude and direction of point defect (d) magnitude and direction of surface defect

7. The amount of energy required to separate the atoms completely [ ]
from the structure, is called
(a) cohesive energy (b) potential energy (c) attractive energy (d) repulsive energy

8. The number of atoms belonging to a unit cell is one, for [ ]
(a) body centered cubic structure (b) face centered cubic structure
(c) base centered cubic structure (d) simple cubic structure

9. CsCl crystal possess [ ]
(a) FCC structure (b) HPC structure (c) SC structure (d) BCC structure

10. Twin boundary in a crystal, is called [ ]
(a) zero dimensional defect (b) one dimensional defect
(c) two dimensional defect (d) three dimensional defect

Cont…..2

Set No. 1

II. Fill in the Blanks:

11. KBr is an example for _____ bond.

12. The number of basic crystal systems, is _____

13. The number of atoms belonging to the unit cell of BCC structure, is _____.

14. The number of Frenkel defects increase exponentially with _____ of temperature.

15. In an _____ crystal system a . b . c and $\alpha = \beta = 90° . \gamma$

16. The angle at which reflection is maximum in X-ray diffraction by crystal planes, is called _____ angle.

17. In the powder method of X-ray diffraction, the camera used is _____ camera.

18. In ionic crystals, an ion displaced from a regular site to an interstitial site, is called _____
imperfection.

19. Silver is an example for _____ bond.

20. The Miller Indices of the plane parallel to Y and Z axes are _____

-oOo-

Set No. 2

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
I B.Tech. I Mid Examinations, November – 2009
ENGINEERING PHYSICS

Objective Exam
Name: _____ Hall Ticket No.

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.
I. Choose the correct alternative:

1. NaCl crystal possess [ ]
(a) FCC structure (b) HPC structure (c) SC structure (d) BCC structure

2. The diffraction of X-rays by crystal planes [ ]
(a) reveals the nature of X-rays
(b) helps to know the characteristics of X-rays
(c) reveals the internal arrangement of atoms in the crystal
(d) helps to know the properties of the crystals

3. Burger's vector gives [ ]
(a) length of Burger's circuit (b) magnitude and direction of dislocation
(c) magnitude and direction of point defect (d) magnitude and direction of surface defect

4. The amount of energy required to separate the atoms completely [ ]
from the structure, is called
(a) cohesive energy (b) potential energy (c) attractive energy (d) repulsive energy

5. The number of atoms belonging to a unit cell is one, for [ ]
(a) body centered cubic structure (b) face centered cubic structure
(c) base centered cubic structure (d) simple cubic structure

6. CsCl crystal possess [ ]
(a) FCC structure (b) HPC structure (c) SC structure (d) BCC structure

7. Twin boundary in a crystal, is called [ ]
(a) zero dimensional defect (b) one dimensional defect
(c) two dimensional defect (d) three dimensional defect

8. The atomic packing factor of a simple cubic structure, is [ ]
(a) 68% (b) 74% (c) 52% (d) 24%

9. The crystal planes (1 1 2) and (2 2 4) are [ ]
(a) perpendicular to each other (b) intersecting at an angle other than 90°
(c) parallel to each other (d) intersecting at an angle 45°

10. The Laue spots close to the centre of the Laue photograph correspond to [ ]
(a) high Bragg angles (b) low Bragg angles
(c) lesser interplanar separation of the crystal (d) larger wavelength of X-rays

Cont…..2
Set No. 2
II. Fill in the Blanks:

11. The number of Frenkel defects increase exponentially with _____ of temperature.

12. In an _____ crystal system a . b . c and $\alpha = \beta = 90° . \gamma$

13. The angle at which reflection is maximum in X-ray diffraction by crystal planes, is called _____ angle.

14. In the powder method of X-ray diffraction, the camera used is _____ camera.

15. In ionic crystals, an ion displaced from a regular site to an interstitial site, is called _____
imperfection.

16. Silver is an example for _____ bond.

17. The Miller Indices of the plane parallel to Y and Z axes are _____

18. KBr is an example for _____ bond.

19. The number of basic crystal systems, is _____

20. The number of atoms belonging to the unit cell of BCC structure, is _____.

-oOo-

Set No. 3

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
I B.Tech. I Mid Examinations, November – 2009
ENGINEERING PHYSICS

Objective Exam
Name: _____ Hall Ticket No.

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.
I. Choose the correct alternative:

1. Burger's vector gives [ ]
(a) length of Burger's circuit (b) magnitude and direction of dislocation
(c) magnitude and direction of point defect (d) magnitude and direction of surface defect

2. The amount of energy required to separate the atoms completely [ ]
from the structure, is called
(a) cohesive energy (b) potential energy (c) attractive energy (d) repulsive energy

3. The number of atoms belonging to a unit cell is one, for [ ]
(a) body centered cubic structure (b) face centered cubic structure
(c) base centered cubic structure (d) simple cubic structure

4. CsCl crystal possess [ ]
(a) FCC structure (b) HPC structure (c) SC structure (d) BCC structure

5. Twin boundary in a crystal, is called [ ]
(a) zero dimensional defect (b) one dimensional defect
(c) two dimensional defect (d) three dimensional defect

6. The atomic packing factor of a simple cubic structure, is [ ]
(a) 68% (b) 74% (c) 52% (d) 24%

7. The crystal planes (1 1 2) and (2 2 4) are [ ]
(a) perpendicular to each other (b) intersecting at an angle other than 90°
(c) parallel to each other (d) intersecting at an angle 45°

8. The Laue spots close to the centre of the Laue photograph correspond to [ ]
(a) high Bragg angles (b) low Bragg angles
(c) lesser interplanar separation of the crystal (d) larger wavelength of X-rays

9. NaCl crystal possess [ ]
(a) FCC structure (b) HPC structure (c) SC structure (d) BCC structure

10. The diffraction of X-rays by crystal planes [ ]
(a) reveals the nature of X-rays
(b) helps to know the characteristics of X-rays
(c) reveals the internal arrangement of atoms in the crystal

(d) helps to know the properties of the crystals

Set No. 3

II. Fill in the Blanks:

11. The angle at which reflection is maximum in X-ray diffraction by crystal planes, is called _____ angle.

12. In the powder method of X-ray diffraction, the camera used is _____ camera.

13. In ionic crystals, an ion displaced from a regular site to an interstitial site, is called _____
imperfection.

14. Silver is an example for _____ bond.

15. The Miller Indices of the plane parallel to Y and Z axes are _____

16. KBr is an example for _____ bond.

17. The number of basic crystal systems, is _____

18. The number of atoms belonging to the unit cell of BCC structure, is _____.

19. The number of Frenkel defects increase exponentially with _____ of temperature.

20. In an _____ crystal system a . b . c and $\alpha = \beta = 90° . \gamma$.

-oOo-

Set No. 4

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
I B.Tech. I Mid Examinations, November – 2009
ENGINEERING PHYSICS

Objective Exam

Name: _____ Hall Ticket No. A

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. The number of atoms belonging to a unit cell is one, for [ ]
(a) body centered cubic structure (b) face centered cubic structure
(c) base centered cubic structure (d) simple cubic structure

2. CsCl crystal possess [ ]
(a) FCC structure (b) HPC structure (c) SC structure (d) BCC structure

3. Twin boundary in a crystal, is called [ ]
(a) zero dimensional defect (b) one dimensional defect
(c) two dimensional defect (d) three dimensional defect

4. The atomic packing factor of a simple cubic structure, is [ ]
(a) 68% (b) 74% (c) 52% (d) 24%

5. The crystal planes (1 1 2) and (2 2 4) are [ ]
(a) perpendicular to each other (b) intersecting at an angle other than 90°
(c) parallel to each other (d) intersecting at an angle 45°

6. The Laue spots close to the centre of the Laue photograph correspond to [ ]
(a) high Bragg angles (b) low Bragg angles
(c) lesser interplanar separation of the crystal (d) larger wavelength of X-rays

7. NaCl crystal possess [ ]
(a) FCC structure (b) HPC structure (c) SC structure (d) BCC structure

8. The diffraction of X-rays by crystal planes [ ]
(a) reveals the nature of X-rays
(b) helps to know the characteristics of X-rays
(c) reveals the internal arrangement of atoms in the crystal
(d) helps to know the properties of the crystals

9. Burger's vector gives [ ]
(a) length of Burger's circuit (b) magnitude and direction of dislocation
(c) magnitude and direction of point defect (d) magnitude and direction of surface defect

10. The amount of energy required to separate the atoms completely [ ]
from the structure, is called
(a) cohesive energy (b) potential energy (c) attractive energy (d) repulsive energy

Set No. 4

II. Fill in the Blanks:

11. In ionic crystals, an ion displaced from a regular site to an interstitial site, is called _____
imperfection.

12. Silver is an example for _____ bond.

13. The Miller Indices of the plane parallel to Y and Z axes are _____

14. KBr is an example for _____ bond.

15. The number of basic crystal systems, is _____

16. The number of atoms belonging to the unit cell of BCC structure, is _____.

17. The number of Frenkel defects increase exponentially with _____ of temperature.

18. In an _____ crystal system a . b . c and $\alpha = \beta = 90° . \gamma$.

19. The angle at which reflection is maximum in X-ray diffraction by crystal planes, is called _____ angle.

20. In the powder method of X-ray diffraction, the camera used is _____ camera.

-oOo-