## BAL BHARATI PUBLC SCHOOL

## GANGA RAM HOSPITAL MARG, N.D-60

M ATHEMATICS
CLASS VIII
SA-1
Assignment No. 7 Ch 13 Representation of Three Dimensional Figures

1. Tick the correct alternative :
i. The number of faces of an octagonal pyramid
a) 8
b) 9
c) 16
d) 17
ii. The Euler's formula cannot be applied for
a) Cone
b) Sphere
c) Cylinder
d) All of these
iii. Euler's formula is
a) $V+F-2=E$
b) $\mathrm{F}+\mathrm{E}-\mathrm{V}=2$
c) $E+V+F=2$
d) $\mathrm{F}+\mathrm{V}-\mathrm{E}=2$
iv. If $F=20$ and $V=12$, then value of $E$ is
a) 8
b) 15
c) 30
d) 34
2. Can a polyhedron have for its faces:
i. 3 triangles?
ii. $\quad 4$ triangles?
iii. A square and four triangles?
3. Is it possible to have a polyhedron with any given number of faces?
4. Is a square prism same as cube?
5. Can a polyhedron have 10 faces, 20 edges and 15 vertices?
6. How many faces, vertices and edges does a tetrahedron have? Verify Euler's formula for the same.
7. Verify Euler's formula for a hexagonal prism.
8. How many edges does a polyhedron have which has four faces and four vertices?
9. A polyhedron has 30 edges and 20 vertices. How many faces does this polyhedron have?
10. A polyhedron has 7 faces and 15 edges. How many vertices does this polyhedron have? Can you give a special name to this polyhedron?
11. Calculate the number of faces of a polyhedron which has 9 edges and 6 vertices. What special name can you give to this polyhedron?
12. Calculate the number of vertices of a polyhedron which has 16 faces and 30 edges.
13. How many faces, edges and vertices does
i. a prism have?
ii. a pyramid whose base is a polygon of $n$ sides have?
14. If a polyhedron has 6 faces and 8 vertices, find its number of edges.
15. A polyhedron has 30 edges and 20 vertices. Find the number of its faces.
