Total No. of printed pages = 7

3D MODELING (Specialization-I)

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks of the questions.

Illustrate your answers with suitable sketches and examples wherever necessary.

Answer question Nos. 1 and 2 and any *three* from the rest.

1. Choose the correct option :   1×15=15

   (a) To activate the snap to grid option you should press :

   (i) The C key on the keyboard.

   (ii) The G key on the keyboard.

   (iii) The V key on the keyboard.

   (iv) The X key on the keyboard.

(b) What is the shortcut key for Move tool in MAYA ?

    (i) The W key on the keyword.

    (ii) The G key on the keyword.

    (iii) The D key on the keyword.

    (iv) The R key on the keyword.

(c) The name of the command that you should use to create a copy of your object inside your 3D scene in Maya is called

    (i) Paste   (ii) Duplicate

    (iii) Group   (iv) Copy

(d) In Maya there are four view ports, what are they ?

    (i) Top, Perspective, Side, Front

    (ii) Top, Side, Front, Back

    (iii) Top, Left, Right, Back

    (iv) Perspective, Camera1, Camera 2, Camera 3

(e) The basic building block for Skeletons in Maya called

    (i) A Controller   (ii) A Group

    (iii) A Joint   (iv) A Polygon

(f) What is the name of the editor that contains all of the attributes for a specific object ?

    (i) Layer editor

    (ii) Component editor

    (iii) Connection editors

    (iv) The attribute editor

(g) What does RGB stand for ?

    (i) Red, Green and Black.

    (ii) Red, Green and Blue.

    (iii) Rose, Grey and Bronze

    (iv) Ruby, Gamboges and brass.

(h) One of the following is a Maya surface material

    (i) All of the other options

    (ii) Phong

    (iii) Blinn

    (iv) Anisotropic

(i) There are 3 different geometry types in Maya and they are

    (i) NURBS, Subdiv., Polygons

    (ii) Polygons, NURBS, Deformers

    (iii) Polygons, Bevels, NURBS

    (iv) Subdiv., Deformers, Polygon

(j) The best projection for UV maps for flat objects is

    (i) Cylindrical mapping

    (ii) Planar mapping

    (iii) Spherical mapping

    (iv) Flat mapping

(k) One of the following is not a type of animation

    (i) Cutout   (ii) Cel

    (iii) Graphic design (iv) Stopmotion

(l) The 3 main components of polygon objects

    (i) Points, faces and control vertices

    (ii) Faces, edges and edit points

    (iii) Vertices, edges and faces

    (iv) Hull, isoparm and points

(m) The Press-Pull tool will _____ the face of a solid model in the direction it faces.

    (i) tapes   (ii) extrude

    (iii) spiral   (iv) None of the above

(n) A cylinder can be created by drawing a rectangular shape then the _____ tool.

    (i) revolve   (ii) sweep

    (iii) extrude   (iv) None of the above

(o) The 3D commands on the Modelling toolbar include_____.

(i) box   (ii) sphere

(iii) extrude   (iv) All of the above

2. Write short notes : (any *two*)   2×5=10
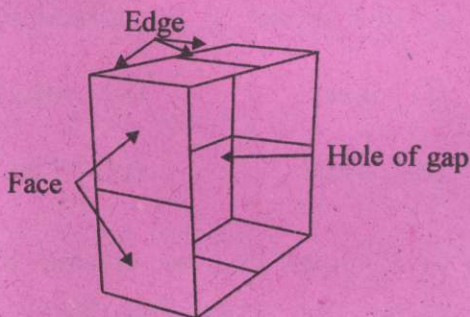
(a) Lambert   (b) Boolean   (c) Bevel

3. Answer any *three* of the following questions :
$$3×15=45$$

(a) (i) Define shelf tab in Maya.

(ii) What is the full form of NURBS ?

(iii) What is the difference between Polygon and NURBS ?   3+2+10=15

(b)

The above diagram is a half sphere. Discuss step by step how you can make a full sphere in the Maya.   15

(c) Which flow is used for eye modelling and use model in animation ? Discuss with diagram. 15

(d) According to you triangle mesh/four-sides mesh, which will be suitable to create a character model in the Production houses ? Give reasons for your answer. 15